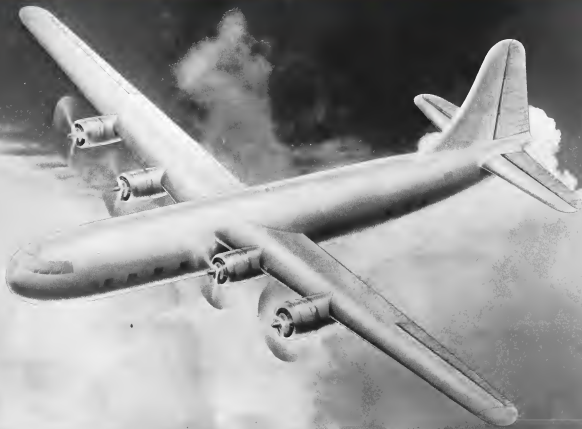


# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

APRIL 10, 1944



**Convair's First Bid for Post-War Airline Orders:** *Awaiting test flights within a few weeks is the first of Consolidated Vultee Aircraft Corp.'s series of post-war planes. The high-winged Model 39 is designed to carry 48 day passengers, 24 as a sleeper, or 12,000 pounds of cargo. Cruising speed 240 mph. Also contemplated are a 60-passenger and 200- to 250-passenger transport.*

## **Convair Announces 48-Passenger Post-War Airliner**

Test flights to begin this month on Model 39, designed to carry 48 seated or 24 sleepers or 12,000 pounds of cargo; range 4,000 miles.....Page 7

## **April Production May Drop After March Record**

Changes in tactical models and new draft regulations to bring slight recession this month, Wilson says; no shortage likely in needed planes....Page 30

## **Export-American Merger Revives Franchise Problem**

First action by domestic air carrier to share in trans-Atlantic business presents CAB with difficult policy case to decide.....Page 21

## **CAB Insurance Study Expected to Lower Rates**

Aviation underwriters believed facing possibility of legislation to stop re-insurance abroad, resulting in leaks in trade and military secrets.....Page 36

## **Air Rule Over New Guinea Aids Westward Advance**

All-out offensive of last few weeks has effected air isolation of enemy and cleared way for continuation of drive along north coast.....Page 18

## **Pilots' Debate Enlivens DC-3 Weight Hearing**

Men who operate planes declare 1936 models are not stressed properly to carry extra half ton, despite bigger power plants and Army tests...Page 39



Push the Pilot with New Tools

## "How can they come back?"

"It was a miracle the ship didn't break in two up there," said an Army Air Force Sergeant, holder of the Congressional Medal of Honor for his part in bringing down a badly crippled Boeing Flying Fortress. "I'd like to shake hands personally with the people who built it."

Major Forrest comes over the radio. They have seen planes limp in with three out of four engines dead, wings and tails mangled like aluminum, or with shell holes as large as wash tubs. How can they do it?

Four engines are built with substantial, multiple spars, covered with a double skin of tough metal. The neck

to keep gas-turbine damage local, rather than basically affecting wing strength.

1. Boeing engineers have chosen to avoid an alternate method of control. And even if battle damage prevents use of all other control methods, the automatic pilot can be used for near-normal maneuverability.

2. Virtually all cockpits are electrically operated. Damage to one control will not affect others, and disposal of these controls reduces vulnerability.

3. The "dual fin," as developed by Boeing, gives the Flying Fortress inherent stability. With the vertical or horizontal tail surfaces partially destroyed

in battle, or with one or more engines shut down, a Fortress can still be flown successfully because of its tail design.

4. But one of the most important reasons why the Fortress fight off enemy opposition, hit their targets and "come back" is the confidence, based on the record, which comes from a Fortress crew to stay with the ship long past normal bail-out time, knowing that somewhere it was, being there safely home.

Being integrity in research, design, engineering and manufacturing will again be a part of present production when the war is won. When that day comes, you can be assured — if it's "Built by Boeing" it's bound to be good.

## Washington Observer

**INTERNATIONAL AIR CONFERENCE** — These plans to attend the international conference on air transport won't have to begin packing for some time. There is little likelihood that such a meeting will be held much before the end of the year. Many factors are involved. First, this is an election year. Our government is in no position to commit itself and will not before November. Two, the meetings now being held in London have been described by a high State Department authority as "exploratory talks" which may lead to "preliminary conversations" prior to the conference itself.

**TIME AND PLACE** — There is an extreme reluctance on the part of possible members of the United States delegation to hold the international air transport conference in London. To mention it now is frowned upon, but even so, some say that we might lose our aviation shirts — or even if we didn't lose them, many would have the idea that we were about to lose them. Some place in Canada has been suggested and that may be the eventual site, although cynics point out that Canada and Britain, thus far, have been unable to reconcile their international airways differences.

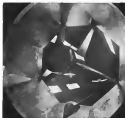
**PEAK PRODUCTION** — The Aircraft Production Board turned out a full-dress news conference to announce March production of 9,128 planes, complete with Board members and military and civilian aides. While it was not mentioned, there were indications that the March unit figure might have been even higher had not a number of aircraft been held back from delivery the last few days of the month.

It appears that the peak in unit output has been reached, for the time being. However, the fortunes of war could change that overnight, although April's schedule calls for less than 8,000. Some production men advise, however, not to be surprised if the industry has a 10,000-plane month before the year ends, despite the assumed March peak. And whether the B-29 is to go into action in the not distant future. A lot of these Boeing "Superfortresses" are rolling off the lines and out of modification centers.

**BREATHING SPELL** — The aircraft production situation has developed to the point where top executives are having their first well-deserved spell in months and consequently a little

time to think about the future of the industry. This does not mean there is, as will be, any let-up in the production effort — to the contrary — but rather that the aircraft plants are operating smoothly, virtually all of them having met or exceeded their schedules last month and with no troubling factors except manpower on the horizon. Part of the lack of a unified aircraft industry position on post-war has been due to the fact that most top executives have been devoting their entire attention to production. The breathing spell may make some change in the situation.

**POST RECONVERSION SPOT** — Probably the hottest spot in the reconversion picture will be in California, center of the aircraft industry. Some idea of the magnitude of the problem can be gained from the fact that 92.5 percent of investment in new aircraft plants since 1944 has been in government funds. The situation is one which precluded a leading aircraft company executive to comment that the public actually owns the aircraft industry, that they should be made to realize this as part of an educational campaign to make the public cognizant of a responsibility for a strong industry to back up a strong air force after the war.



Fighter model tested in 22-foot NACA tunnel

**KAISER IN AGAIN** — As of deadline, Henry Kaiser was again in the running for presidency of Brewster Aeronautical at the annual meeting



# CLEAR AND WARMER— IN THE CABIN!

## WITH WHITE-RODGERS MOTORIZED TEMPERATURE MODULATION

Comfort and clear windows under extreme atmospheric conditions help build the case in favor of a courageous crew

Heated air at the correct temperature and velocity to prevent window frosting and maintain comfortable cabin temperatures is provided by carburetor or transfer heaters equipped with White-Rodgers motorized temperature modulators. Motor, modulating switch and gear assembly enclosed in dustproof, moisture resistant case—25 inch-pounds of torque provided for operation of air duct damper—cold tested at  $-65^{\circ}\text{F}$ .

Engineering data on the above and other White-Rodgers motorized controls will be forwarded to authorized newsmen upon request.



**WHITE-RODGERS ELECTRIC CO.**  
SAINT LOUIS, MO.

MAKE THEM MORE AND MORE AUTOMATIC



ORIGINAL PHOTO U. S. AIR FORCE

VOLUME 1 • NUMBER 37

**Aviation News**  
McGraw-Hill Publishing Co., Inc.

April 10, 1944

## Details on 48-Passenger Airliner For Post-War Release by Convair

Test flights to begin soon on four-engine Model 39, designed to carry 48 seat passengers, 24 in berths or 12,000 pounds cargo; cruising speed near 340 mph.; range 4,000 miles at 300 mph.

By SCHOLER BANGS

Consolidated Vultee Aircraft Corp.'s first post-war airliner, the 48-passenger Model 39, will be test-flown this spring—perhaps this month—at San Diego. With the Model 39, Convair will send into the air the first of a wide variety of wartime-planned airliners that will initiate U. S. competition in international post-war air commerce.

The Model 39 combines a spacious, specially designed fuselage with Liberator wing, engine, tail and landing gear components that already have been performance-proven in two years of successful wartime operation.

Not a Composite Model—In

discussing details of the Model 39 to AVIATION NEWS, E. M. Laddon, executive vice-president of Consolidated Vultee and designer of the B-24 Liberator bomber, emphasized that it is in no respect a composite design, such as the C-47 Liberator Express conversion of the B-24. He considers the C-47 essentially a "stop gap" wartime model, although a successful one.

Intended for long-range operation (flights up to 3,000 miles), Model 39 will carry 48 passengers, baggage, and 12,000 pounds of mail as a day plane; 24 passengers as a sleeper; or 12,000 pounds of payload as a cargo carrier. Its top speed will be 370 mph.; nor-

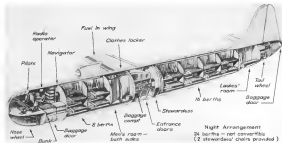
mal cruising speed of 340 mph. at 50 percent power, and maximum range, at 300 mph. (most economical cruising speed) is slightly more than 4,000 miles.

➤ **Gross Weight**—Its basic gross weight is 58,000 pounds for both passenger and cargo models, although design specifications set provisional gross weights of 62,000 and 64,000 pounds for the cargo version.

The passenger version, by using a provisional gross weight of 62,000 pounds for takeoff, will be able to fly the longest non-stop trans-ocean crossing (2,400 miles from San Francisco to Honolulu) with a full load of 48 passengers and baggage, and adequate fuel reserve, according to Frank Leuzman, general sales manager of Consolidated Vultee.

➤ **Landing Speed**—Landing weight, allowing for gasoline consumed on the trip, permits a landing speed not in excess of CAA limitations, he says.

An indication of the performance worthiness of the plane appeared in recent maintenance of an 8 hours, 39 minutes flight made



Over-All View of Berth Arrangement: Cutaway sketch of Consolidated Vultee's projected Model 39, long

range cruiser, showing layout of the 24 berths. For day travel, the plane will carry 48 passengers seated



Seating and Sleeping Arrangements on Model 38: Forward compartment looking forward. Photo at left shows forward compartment looking forward.

at an average speed of 265 mph. from Honolulu to California by a Liberator Express of Consolidated, Consolidated Vultee division operating a California-Australia passenger and cargo service for the Army.

**Not World's Largest**—The Constellation is not the biggest planned, either by Consolidated Vultee or other companies, but it demonstrates in size, load capacity and speed the convictions of many concerning the type of airplane that may prove to be most practical during initial stages of post-war development of world air routes.

This trend is expressed in Great Britain by the Avro York, which, while not so clean or advanced as the Model 28 design, has comparable dimensions and can carry 50 passengers on comparatively short flights.

**Dimensions**—Model 38 wingspan is 110 feet; fuselage length is 90 feet with a maximum diameter of 30 feet 6 inches; and the cargo version provides a floor area of 240 square feet and a total cargo capacity of 3,890 cubic feet.

Performance specifications show that it will, as a cargo or passenger model, take off over a 50-foot obstacle on a paved runway at a distance of 3,100 feet, and land over a 50-foot obstacle in a distance of 2,900 feet.

It can carry up to 48-52 passengers for domestic routes as well as mail or cargo, depending on how much the fuel load is decreased and what the certificated gross weight is for the routes in question.

Easy loading is a notable design feature, and in the passenger model passengers are provided quick and easy entrance through

mid-entrance doors with a 18-inch step up from ground to cabin lobby.

**Passage Position**—For cargo loading low position of the fuselage will eliminate any loading difficulties and heavy objects can be loaded readily through large fore and aft doors of the cargo version.

Several aspects of Model 38 undoubtedly will appeal to passengers:

**The high wing** provides excellent, uninterrupted view from all windows and also eliminates any glare that might be a source of passenger discomfort in low wing designs. (Consolidated officials point out their belief that the high wing will reduce the hazards of forced landing in that the risk of damage to wing and engine and consequent possibility of fire is reduced.)

**Wing Loading**—The airplane's high wing loading will provide any riding in rough air beyond that attainable in a large airliner of lower wing loading and the triangle landing gear and efficient Lamber flap more than compensate for the higher stalling speeds.

Convair has retained a noted industrial designer, Henry Dreyfus, to design interiors of the plane's passenger versions. His past accomplishments include the design of the Pullman rockette, the 20th Century Limited and many other things which prove that Mr. Dreyfus is one of the top flight experts in combining utility and appearance. He is responsible for the curved arrangement of seats, and the design of a reclining seat with headrest wings and a reading light built into the wing at the left of the passenger's head and a practicable forward facing seat layout which will convert into upper and lower berths.

Laddon said Dreyfus was chosen to plan and design Model 38's passenger version interior because "he has proved his ability to combine pleasing design with utility. His specialty is compact transportation arrangements."

## Start of Reconversion Believed Hinging on Invasion Success

Increasing readiness of industry expected to force Army and Navy concessions soon where surplus materials and manpower are available.

While Congress remained engrossed in a maze of reconversion legislation and another week passed without any disposition of committee proposals and under-consideration and lagging for authority, the action moved steadily closer to actual reconversion.

Just when any substantial reconversion would be permitted remained a secret with Army and Navy chiefs, since there was no denying that Army and Navy are in complete control of the situation. Time and again they have responded to impatient War Production Board officials that there can be no large-scale reconversion until after the success of the invasion is assured.

**Industry Restless**—But there are ample indications pointing to the fact that, despite the invasion element, there is an increasing restlessness on the part of the civilian agencies to return idle facilities to civilian production. This movement is strengthened by industry's concern over current and impending cutbacks, and in many quarters there is a growing feeling that the Army and Navy position may soon become untenable. If this occurs, a limited-but definite-reconversion will result, regardless of military action.

One high WPA official recently was described as saying that reconversion on a substantial scale was not so far off as most people were being led to believe, and followed that with the prediction that within three months there would be "some substantial reconversion problems to be faced."

**Half-Way Step Reported Considered**—Another WPA official, pointing to the increasingly larger cutbacks being made, asserted that war production schedules were such that "a half-way step at reconversion" could now be made. Continuing, he admitted there are "dozens of items which we could give materials to right now."

If these WPA officials are cor-

### AVIATION CALENDAR

Aug. 11—Associated General of America, annual convention meeting for studies of progress, Brooklyn R.M., Washington.  
Aug. 12—Aviation Week ends, New York.  
Aug. 12-14—Royal Aeronautical Conference Society of Aeronautical Engineers, Engineers Palace Hotel, London, Eng.  
Aug. 14—First day of East Coast Aircraft War Production Councils, New York.  
Aug. 15-16—National Light Aircraft Meeting, National of Aeronautical Engineers, Seattle.  
Aug. 20-21—Southern Aircraft and Aeronautical Engineers, Seattle, Wash.  
Aug. 21-22—Third Mid-Atlantic Aircraft Production Council, New York.  
Aug. 23—National Conference on Aviation, International Institute of Aeronautical Engineers, New York.  
Aug. 24—National Council of Aeronautical Engineers, New York.  
Aug. 25-26—National Aircraft Production Council, New York.  
Aug. 27-28—National Aircraft Production Council, New York.  
Aug. 29-30—National Aircraft Production Council, New York.

rect, and there is every reason to believe they are, it will mean that reconversion of part of the aircraft industry may not be so far away, despite the fact that aircraft plants will likely be sending a last in return to civilian production. In some quarters it has been estimated that by the year end—and that is based on the assumption that the invasion is successful—from 25 to 50 percent of the aircraft's industrial facilities will be made idle as a result of reconversion.



### SPERRY GYROSCOPE TESTED:

Technicians at the high altitude laboratory at the Sperry Gyroscopes plant on Long Island are shown making an adjustment on a Sperry A-3 Gyrocompass prior to subjecting the instrument to atmospheric conditions in the test chamber. The main test cham-



ber is 16 feet long and 12 feet in diameter. Dr. Elmer H. Hefner, medical supervisor of the laboratory is shown taking notes from Irving Hefner, an engineer. Observer on the outside is Dr. Stephen J. Zerk, director of the laboratory.

in the Army supply program and consequent cutbacks and cancellations of contracts. If the latter and higher figure is correct, it is certain that many of those facilities will be those now making aircraft components and it is not unlikely that some are actually airframe or straight aircraft plants.

**Reconversion Agency Unlikely**—The question of who will do the reconversion job is still unsettled, but there is more and more likelihood that the actual retooling of the war organization will be done by WPB. This agency, adequately staffed and with the experience of handling war production problems and war contracts for two years, is expected to continue as the war production organization, yet at the same time take over reconversion and eventually balance the two. Thus WPB would juggle the two big jobs, giving increased importance to one as importance of the other waned.

The heart of WPB's reconversion organization is expected to be the Production Planning and Adjustment Committee, which is now being created by executive Vice-Chairman Charles E. Wilson. Although no formal announcement has been made of the committee, it is no secret that such a group is being established and that it will consist of high Army, Navy, Maritime Commission, and WPB officials.

**Study Cutbacks**—Chief function of the committee, as it is now

planned, is to study cutbacks, place them in scattered locations so as to prevent the dislocation which would occur with concentration of lower disassembly, and direct the placing of new contracts so as to correct bad situations. From the point of view of the aircraft industry, this committee will play an interesting part in the reconversion program.

What large industries will be reconverted first remains a question, the answer to which no one in Washington probably knows. It will hardly be the automobile industry, since that competes with aircraft for materials and other components. Many believe that, when reconversion comes it will come in the form of gradual elimination of WPB's L and M orders, and the granting of permission to war contractors to do civilian production on the side whenever it can be done without disrupting production schedules.

## Two New Fighters Near Production

News of two new fighter planes have appeared over the production horizon, although there are no details available on either of them. One is the two-engine fighter produced by Grumman, which has one of the best aircraft company production records. The other is a Royal Air Force plane described

## Airplanes First

Aircraft will be one of the first industries to be halted when a war contract is terminated or modified, according to plans now being worked out in the War Relocation Authority.

New under consideration is a plan to permit certain firms under processing to go on to completion despite contract termination on the grounds that the completed item is much more marketable than an incomplete one and neither the margin of cost nor the effort expended would make for greater ease of disposal, and in many cases the government could get better prices for the goods caught in the pipeline by termination.

Certain items such as shoes, for example, would be virtually worthless if halted incomplete. Putting these items through the pipeline would give them value.

Aircraft, on the other hand, is definitely marked for prompt halting. Tanks are also in the class where no further work would be done after a contract is terminated.

merely as a super-fighter and more sensational than any now in production.

**Put Through Paces**—Grumman's new fighter was put through its paces recently for the benefit of a group of veteran Navy flyers who were enthusiastic over the plane's performance.

The new RAF job is reported to be far enough advanced so that it will "be ready this spring." It is said to be an enormously powerful, heavily supercharged plane designed for performance in high altitudes.

## Puerto Rican Plans

A tentative blueprint for expanding post-war aviation facilities in Puerto Rico has been presented to the Puerto Rico Planning Board by Frank T. Martore, chief of the Board's Urban Development Division. The existing four military airports, which are expected to be converted to civilian use after the war, the plan can be put into operation by the construction of only three new fields, with ten others to be added later. One of the proposed schemes is estimated at \$11,375,000.

## Aviation Country Clubs Planned

Plans for post-war private flying expenses are sparking interest in aviation country clubs, landing parks, and aviation centers, especially in Florida and California. From now on, aviation publications will be carrying stories of increasing numbers of projects such as the Miami Aviation Center, where runways will be built this spring.

Construction of hotel and administration buildings, restaurants, a sculpture ramp, club house, swimming pool, and other recreational features must await the end of building restrictions.

**Ray Frontage**—The Miami center, being developed by Jack Keefe and R. E. Flynn, will occupy a tract bordering on accessible Biscayne Blvd. and will also have a mile of bay frontage. The Interdepartmental Airways Traffic Control Board in Washington and the North Miami city council approved construction.

Two wide runways for landplanes will be bordered alternately by cottages, each with its own private hangar and garage, under present plans. The entire 3,600-ft. beveled frontage is charged for commercial buildings, including large lounge dining rooms where private planes will be displayed. Flynn operates Gulf-Ways Aircraft Co., dealer and distributor at Municipal Airport, Cleveland.

## Wisconsin to Study Post-War Air Plans

An executive committee to act as a clearing house for post-war aviation recommendations has been appointed by the Wisconsin Aeronautics Advisory Board.

**Recommendations**—The board, which held its first meeting April 2, already has received recommendations for uniform regulations, aeronautics training in primary and high schools, and adequate legislation and aid and advice to communities contemplating construction of airports.

Members of the executive board and the section they will head are: Advisory Board Chairman Carlyle Cooke, chairman, Bradley Taylor, secretary, Francis Broeker, legislators, Chester Allen, aviation training and education, Walter Com, commercial section, and Paul Taber, private aviation.



**Proposed Designs for Private Flying Center:** Artist's conception of Miami aviation country club, including private swimming pool, golf course, etc., supplemented by a plane sales and display hangar (above), and private homes (below), with hangar, adjoining flight strips beyond.



## Auto Plant Methods Fail to Work Out

Techniques found not adaptable to plane production, despite record March output.

Despite the March production of airplanes—more than 5,000—the mass production of aircraft put forward as possible by the adoption of automobile production methods has not been achieved and probably will not be under present conditions, one expert says.

Thomas N. Kelly, Consolidated Vultee Aircraft Corp. speaking before the closing session of the RAE National Aeronautics meeting in New York, explained that production requirements of the aircraft-buying public, comprising at the moment the United Nations governments, are the strict.

**Changes**—Design changes to meet tactical needs are the frequent capacity for absorbing planes, limited by necessity for training personnel to use them, is too limited. Demand, while larger than ever before, does not approach the volume requisite to mass-production.

Planes which are obsolete almost as soon as the scale drawings are completed, and which must be manufactured from materials whose strength is taxed to the limit, just do not lend themselves to mass-production techniques which, rid of design complexities and blunted by large quantities, can speed automobiles by the thousands.

**Mass Production**—Application of mass-production techniques to aircraft manufacture, Kelly said, has developed neither along lines nor to the extent once widely predicted, which is somewhat contrary to the views of those who believe that the record of the aircraft industry can not be described even by the extravagant phrase "production miracle."

Kelly noted that the automobile and aircraft industries administratively have exchanged techniques, the other industry contributing organization and management controls, engineering accuracy and cost consciousness—a viewpoint which undoubtedly will be dictated by executives of the old line aircraft industry.

The aircraft industry, Kelly commented, has stimulated interest in new materials and methods



**DOUGLAS OPERATES OUTDOOR LAB**

Douglas Aircraft Co. operates an expensive outdoor testing laboratory alongside the Douglas Santa Monica plant. Nearly a score of critical tests of parts, metals, plastics and design elements are under way here at all times. Photo shows engineers running fuel system tests.

## 40% of GM Output Is Aviation Items

Deliveries for 1943 total \$3,546,584,598, up 67 percent, annual report shows.

Aviation items now account for more than 40 percent of the dollar volume of General Motors war material deliveries, according to the corporation's annual report, which shows 1943 total deliveries amounted to \$3,546,584,598, an increase of 67 percent over war deliveries of \$2,088,168,448 in 1942.

War products represented about 95 percent of total net sales of \$3,796,115,880 in 1943, the remainder having been made up of war products.

**1943 Net 60**—Net income for 1943 amounted to \$148,758,683 against \$143,831,368 in 1942. After paying dividends of \$9,170,320 on the \$5 series preferred stock, there remained \$140,607,488 or \$2.32 per share for common stock. The amount earned on common for 1943, including income items of a special nature, was \$154,473,666, equal to \$2.35 a share. The amount earned on common stock in 1942 before adding income items of a special nature was \$2.84 a share.

The 1943 net income gives recognition to the following provisions and charges:

- Deduction of \$38,465,636 for post-war contingencies and re-evaluation. This is in addition to a total of \$49,184,989 provided in 1941 and 1942, making an aggregate of \$88,650,625 available for that purpose as of Dec 31, 1943.
- Deduction of \$14,816,669 for refund in connection with overall re-

negotiation of war material contracts.

• **Provision for United States and foreign income and excess profits taxes** in the aggregate amount of \$248,320,464 compared with \$124,500,520 in 1942. In 1943 the amount includes provision for United States excess profits taxes of \$158,385,975, after deducting \$17,587,324 for the post-war credit applicable thereto.

• **Dividends**—Dividends totaling \$97,000,000 were paid on the common stock in 1943 and 1942, compared with payments of \$183,066,500 in the previous year of 1941. Net working capital amounted to \$239,338,333 on Dec 31, 1943, compared with \$682,339,139 on Dec 31, 1942. Investments at the end of 1943 amounted to \$545,411,454, an increase of \$98,145,879 during the year.

## Aluminum Extrusion Situation Improves

The extrusion situation has improved so materially that the Operating Committee on Aircraft Materials Conservation says conversion from extrusions to rolled sections is entirely optional with the aircraft contractor.

A study of Aluminum Alloy Extrusion, this has been prepared and distributed by the National Aircraft Standards Committee, which lists all the commonly used extruded shapes. Most of these are available for use by any U. S. aircraft manufacturer. The Committee stressed that standardization in both extrusions and rolled formed sections is needed in order to avoid future shortages.

## Electronic Turbo Regulator Developed

Minneapolis-Honeywell reveals data on new device used on heavy bombers in high altitude flying.

An electronic turbo regulator controlling the "breathing" of four-engine AAF bombers has been developed by Minneapolis-Honeywell Regulator Co., Minneapolis, and has been in combat service in war theaters since late last summer. W. J. McGoldrick, vice-president in charge of aeronautical research, reports.

Developed at the request of engineers of the Materiel Command at Wright Field, the electronic mechanism controls turbo supercharger speeds and automatically provides maximum safe power output and efficient thrust. It is the acutest of high altitude engine control. McGoldrick points out that it also prevents superchargers from blowing up and causing serious accidents and crashes.

**Used on Heavy Bombers**—Although use and operation of the two instruments are identical, the turbo regulator employs the same basic principle as the altimeter-limiter pilot also developed by Minneapolis-Honeywell. The turbo regulator has been on Army heavy bombers for some months, though public knowledge of it has been withheld until now. It has been definitely established that the enemy is no longer in the dark about American engine control at high altitudes.

Principle of the turbo supercharger is to compress the needed air of the upper atmosphere and feed this to the carburetor under a pressure sufficient to obtain the high power output required of aircraft engines.

**Prevents Overspeeding**—One engine of a Flying Fortress consumes five tons of air an hour at cruising speed, and many times this at top speeds. Supercharger speeds, depending upon compression requirements, range up to 28,000 revolutions a minute, but any speed over this will blow up the turbine, endangering the crew as well as causing a drop in manifold pressure, which renders the engine practically useless at high altitudes. Pilots are well aware of the fact that overspeeding can take place in the fraction of a second, and have long sought a control to relieve them of the duty of watching turbo speeds and at the same



KEY HYDRAULIC ENGINEERS AT CHICAGO MEETING:

Some of the leading aircraft engineers who attended the Society of Automotive Engineers—National Aircraft Standards Committee hydraulic meeting in Chicago are shown here at one of the series of sessions to coordinate opinions on aircraft hydraulic equipment and Army and Navy opinion on design and standardization of combat equipment. Seated, left to right: F. O. Hootenrath, Lockheed; R. H. Davies, Parker Appliance Co.; L. Henderson, Weatherhead Co.; R. R. Terce, Curtiss-Wright; J. D. Sedding and Gladys Shuman, SAE staff; Harry Kuper, Glenn

L. Martin Co., chairman; Frank W. Murphy, Douglas; and Howard Field, Jr., Los Angeles. Chief Standing: John Saxon, Product Engineers, W. V. Fitch, Merrill Corp.; J. Demetriou, Lockheed; George A. Bess, Aircraft Accessories Corp.; B. F. Ashton, Electro, Inc.; Andrew Ruffin, Jr., Perfection Products, Inc.; E. F. Louche, Bess Industries; B. C. Ruppel, Adel Precision Products Corp.; J. P. Kasper, Perfection Products, Inc.; R. H. Benson, Bendix, Pacific Division; and Gene H. White, Adel Precision Products Corp.

line make possible maximum efficiency," says McGoldrick.

Up to now, supercharger controls required frequent readjustments as the airplane changed its altitude or speed and, further, there was no fixed top limit on turbo speed or manifold pressure, the company official says. At extreme combat altitudes, the previous regulators were sluggish and unreliable, while during combat when the pilot was occupied with other things, the regulator would frequently cause engine failure or serious accidents.

**Single Knob Control**—The new turbo regulator operates from a single knob control mounted on the cockpit throttle arm. This adjustment controls all four engines and provides a simplified control of winged or bombing runs. From this point on, the pilot need no longer bother with supercharger control problems unless, at some time during the flight, he desires to alter manifold pressure, in which case he merely has to readjust the control knob.

McGoldrick explains that the system itself operates continuously, making manual adjustments in static rpm positions as the plane gains or loses altitude, moves into hot or cold fronts where air pressure varies, or an airplane speed is

changed through altered throttle position.

**How It Works**—The turbo boost selector, which is merely a technical name given for the selector knob, operates by sending an electrical signal to an amplifier. This signal is combined with another signal generated by a device operated by carburetor air pressures. The amplifier interprets these signals and expels them into the gas meter to maintain the selected

carburetor air pressures regardless of altitude.

The turbo regulator also contains a governor, McGoldrick says, which is directly connected to the turbine and which automatically prevents the supercharger from overspeeding by acting up on "electrically high limit" and thus preventing the system from demanding more from the supercharger than it can deliver.

## Standing Committees On Aviation Urged

A bill by Senator Pat McCarran to set up a 13-member-standing committee on aviation, which McCarran says he has introduced periodically for some years, has been referred to a subcommittee of the Senate Rules Committee for study. Senator Kenneth McKellar is chairman of the subcommittee.

McCarran said such a committee is necessary because aviation is the "greatest vehicle for commerce the world has ever known. It has the greatest future looking toward the development of foreign commerce."

For that reason, he said, legislative problems affecting aviation should be handled by a separate body.



SEAGOING C-47'S ORDERED BY ARMY:

An undivided number of these Douglas land-water transporters have been ordered by the Army for production at Oklaheima City. The C-47, military edition of the DC-3, increases its versatility with the amphibious float equipment ordered just several months ago by AVIATION NEWS. The amphibious float has retractable landing gear.





## Suit Tests Validity Of Minn. Port Body

Action filed to restrain state officials from carrying out measures.

Effectiveness of Minnesota's new Metropolitan Airport Commission, created by the 1943 legislature, may hinge on an appropriation suit that is expected to go to the State Supreme Court for final decision.

Specifically attacking constitutionality of a \$1,000,000 appropriation for the Commission's use, Elmer Erickson of Cambridge, Minn., brought action as an interested taxpayer in District Court in St. Paul. He seeks to restrain Minnesota state officials, including Gov. Edward J. Thye, from carrying out provisions of the law creating the Commission.

**■ Certificates Ordered**—Acting under the 1943 law, Governor Thye last month authorized the state auditor to issue \$75,000 in certificates of indebtedness to be available for the Commission. The act provides for the levy of taxes sufficient to raise \$100,000 every year for ten years beginning in 1944. Prior to such beginning, the state auditor, on the request of the governor, may issue and sell certificates of indebtedness as the need may arise.

The act further provides a million dollar appropriation to the governor for the bureau ending June 30, 1945, of which a half million will become available in June of this year. Such money turned over to the governor, spent on his authorization, is paid to the treasurer of the Metropolitan Airports Commission and "to the treasurer of municipalities in the state operating and maintaining airports which are qualified under laws set out in the act."

**■ Locations of the airports and their usefulness as a part of a state, national or international system of air transportation.**

**■ The benefit of such airports to the people of the state as a whole, as distinguished from purely local benefits.**

**■ Possibilities of their use in providing for state and national defense.**

**■ As being made of them by the federal government during the present war and the probability of future use in connection with the war.**

Erickson charges that the appropriation approved by the 1943 legislature is "unconstitutional and void" because expenditure of money raised by taxation is being authorized "for private purposes." Other complaints are that the law permits a public debt to be contracted for internal improvements and makes the state obligated to carry on the projects, that it authorizes debts to be contracted by loans on instruments other than state bonds and allows the credit of the state to be given or lent in aid of individuals, associations, or corporations.

## Brantiff Asks O.K. On Aerovias Merger

Involves purchase of president's million peso interest.

Brantiff Airways has asked the Civil Aeronautics Board to approve its acquisition of Aerovias Brantiff, S. A., Mexican company organized by T. E. Brantiff, president.

The deal involves purchase of Mr. Brantiff's million-peso interest in the Mexican line by Brantiff Airways Aerovias Brantiff, which recently acquired rights of Lineas Aereas Nacionales, now holds operating licenses from Mexico over 4,600 miles of routes.

**■ Five Planes Needed**—Brantiff Airways, which would pay a million pesos for its president's interest in the Mexican set-up, estimated that five planes were needed for the operation, but said it didn't know when they would be available.

It asked a hearing and that the Board find the transaction in the public interest.

**■ Interlocking Directorate**—In the next docket (1361), Brantiff and T. E. Brantiff asked approval of an interlocking relationship for the latter as president and director of Brantiff Airways and the same capacity with Aerovias Brantiff. If the acquisition sought (in docket 1360) is approved, it was explained, the company will be affiliated, but if not, approval of the interlocking relationship will be necessary. The same request was made for C. G. Adams, secretary-treasurer and director (docket 1362).

Brantiff's salary in 1943 was \$24,000 and he received \$51,243 as dividends, while Adams' salary was \$6,626 and his dividends totaled \$428.

## Three Lines Argue For Midwest Routes

Seek permits for service in Kansas City-New Orleans area.

Need for air service development in the central United States region from New Orleans to Kansas City was outlined in a hearing last week before CAB Examiner Frank Low, Jr. Applicants of Mid-Continent Airlines, Inc., Delta and National Air Lines for service between these cities and intermediate points were involved.

Delta asked authority to operate from Kansas City to New Orleans via Joplin, Fort Smith, Texarkana, Shreveport, Alexandria and Baton Rouge. The new route would intersect with Delta's trans-southern route at Shreveport. The airline now holds authority to operate between Shreveport and New Orleans.

**■ National Asks Two Routes**—National proposes two routes, one via Springfield, Mo., and the other by way of Tulsa, Muskogee, Fort Smith, Little Rock, Texarkana, Shreveport, Monroe and Natchez, the other by way of Tulsa, Fort Smith, Texarkana, Shreveport, Alexandria and Baton Rouge.

Mid-Continent also asked authority for two routes, one from Kansas City to Springfield, Little Rock, Monroe, Vicksburg and Natchez, the other by way of Tulsa, Fort Smith, Texarkana, Shreveport, Alexandria and Baton Rouge. Mid-Continent now operates into Kansas City from the north, and extension of service to New Orleans would give it service from Minneapolis-St. Paul and from Birmingham, N. D., to the Gulf.

## Farm Writ Hampers Allentown Aviation

Suspension of United Air Lines service to Allentown, Pa., feared by a preliminary injunction against low flying over farm properties adjoining the city airport, is seriously hampering operation of the Consolidated Vultee plant.

Ferry pilots annually flown in by United, afraid of writ and air program shipments of parts now have to be brought into the Allentown plant by rail.

**■ Controls Operations Cramped**—Flying operations at Consolidated Vultee have not been hampered because the plant has its own airfield.

## This is a game for experts

Commercial Air Transportation is a "game" requiring many experts—from the aircraft designer to the pilot who actually does the flying. But even these experts would have trouble without dependable vacuum electronic controls, instrument landing and efficient electronic control centers. Eimac is the recognized "expert" in this phase of the commercial air transportation "game."

One reason may be that Eimac and the airlines grew up together—laying the foundations for the great new public service. But the most important reason is that Eimac tubes possess vastly superior performance capabilities and great stamina. These are the reasons that have made Eimac tubes first choice of leading Electronic Engineers throughout the world in all new developments in the field of electronics.

Follow the leaders to

# Eimac

TUBES

EITEL-McCULLOUGH, INC.

145 Van Winkle Avenue, San Bruno, California  
Plants located at San Bruno, Calif. and Salt Lake City, Utah

Get your copy of  
**ELECTRONIC TUBES**  
This 16-page paper contains vital information on electronic tubes and their applications in the electronics industry. It is a valuable reference for all electronic engineers and technicians. Write for your free copy today.

Expert Agents: PRAGER & MORGAN, 400 Clay Street, San Francisco, California 94107

## COMMENTARY

## Air Rule Over North New Guinea Aids Steady Westward Advance

All-out offensive of last four weeks has cut plane opposition to minimum, effected air isolation of enemy and cleared way for continuation of drive along coast.

Wewak, Aitape, Hollandia and other enemy air bases on the northern coast of New Guinea are rapidly becoming graveyards of Japanese fighters and bombers as General Kenney's Liberators, Mitchells and Hornets, escorted by Lightning and Thunderbolts, have put on an all-out offensive during the past four weeks. Air opposition, fairly strong at first, dwindled steadily, so that since Mar. 28 there has been practically none.

The big attack last week by 300 of General Kenney's planes probably wiped out Hollandia as an effective air base and from now on the object will be to neutralize it. Earlier, low flying attacks were made with much effect and surprise, such as on the 28th and 29th, for example, at Hollandia where more than 100

enemy aircraft were destroyed or heavily damaged like sitting ducks on the ground. In addition to this, practically all Jap shipping between Aitape/Saipu Bay (Sopetrans) and Hollandia, including an entire convoy, was sent to the bottom.

► **New Guinea Movement**—Dedicated were cleared for the drive west across the New Guinea coast by (1) the completion of the four-month Ross Peninsula campaign where American and Australian forces effected a junction near Sador on Feb. 9; (2) the capture and occupation of the Admiralty Islands during the three weeks beginning Feb. 26, cutting off Wewak and other bases to the west from Kavieng and Truk; and (3) the occupation of Rossia in the St. Matthias Islands closes the route

## 'Ridiculous'

Barney that "anyone is on trial" or that some theoretical deadline has been set before which anyone must prove itself "are as ridiculous as the widely extravagant claims by someone that untrained personnel of air power who once said that with a couple of thousand heavy bombers we could wipe Germany off the map in a week." Gen. St. H. Arnold, commanding general of the Army Air Forces, believes.

The statement, made before the Army-Navy conference of industry and labor leaders in Los Angeles, has just been reissued.

by cutting off Kavieng itself. The complete isolation of the M/R New Guinea coast by air blockade has now become a possibility. The successful conclusion of the Bismarck Sea campaign, and neutralization of the outer islands of Rabaul and Kavieng, eliminates the possibility of a Jap flanking attack on the main Central Pacific line of drive, from our base bases in the Marshall through the Carolines—Marshall—Philippines to the China coast. The New Guinea campaign will become an important supporting drive, the capture of Hollandia (Netherlands East Indies) being the first main objective. Already the important base at Madang is threatened.

► **Hard Blow to Hollandia**—At this writing, our troops are in the Bagadrian area, west of Sador, and from there to Hollandia is about 450 miles on the Larkinson Trail. Unlike the Central Pacific drive, there is no possibility of leap-frogging this impressive distance in a single hop. The only land communication is a primitive coastal track. Good harbors are few and far between, and while surprise landings may be made at many points, supply will be a great difficulty in any by-passing tactics.

The enemy still has strong forces at Hama Bay, Kramel Bay (near Wewak) and a few other possible harbors. He also has the bulk of the wildcat sites, such as those at Madang, Nuhia and four in the Wewak area (Bersen, Degun, Wewak and Rai). These have been largely neutralized, and those farther west are being attacked. The last are now under heavy attack almost

daily. Air supply and airborne surprise attacks used so successfully in the quick conquest of the Salamaua-Lae campaign early last September, will again increase the progress of the ground troops. Air power will attempt to keep enemy aircraft out of the skies, will largely prevent supplies and reinforcements from reaching the new isolated Jap bases, but our ground forces will have to advance from base to base under conditions of almost unbelievable difficulty.

► **Air Battles in New Guinea**—The importance of Rabaul, less than 1,000 miles from the vital base of Palau, and thus a possible jumping-off place for a drive on the Philippines, indicates a determined effort by the Japs to slow up General MacArthur's advance. Enemy fighters and bombers can still be seen-begged from Milne Bay by way of Talau and Malakal, and these seem to be a disposition to keep throwing them in, despite huge losses. This hampering of air bases will probably have to be continued. Since the battle of the Bismarck Sea an outstanding specialty of the Fifth Air Force has been minimum altitude bombing. This has its application as an anti-shipping technique and has proved equally successful in anti-airfield strikes.

For both purposes Mitchell (B-26) and B-24 (A-26) attack bombers, heavily armed with forward-firing 50-caliber guns, have been exhibiting. The eight 50's in the nose of the B-26 were originally a Fifth Air Force adaptation, and it has become standard on the latest attack version of the Mitchell, plus one more 50's in top and sides, and 75-caliber cannon. This new plan is now in action in several theaters, including New Guinea.

► **Other Equipment**—The fast, low flying B-26 fighter-bombers are hardly less effective, and the latest version of the A-26 series has its forward-firing 37's, four in the nose and one on each side of the forward fuselage, twin-mounted power turret on top, behind the cockpit, and a so-called tunnel gun below the fuselage. The occurrence of "pan-fires," deadly bombs for low altitude work equipped with parachutes to delay action until the attack bombers can get away, is another successful development of the Fifth Air Force.

For the heavy attack on Aitape and Hollandia, the hard-battling

Liberators, escorted by long-range Lightnings, have been carrying the ball. The Thunderbolts also have been highly successful in this theater. Air and ground forces developed the closest possible cooperation, and despite all difficulties, progress should be steady.

MARTIN

## AAF Lifts Ban On Crash Reports

Allows publishing of stories as long as security is not involved.

Facts concerning military airplane crashes, taking place at points other than on Army property, may be published without restriction as long as security is not involved, the Army Air Force decreed in a recent advisory pamphlet distributed to its public relations officers.

The orders not to obstruct the business of giving the public such facts apparently signifies a new era in AAF public relations, in contrast to some policies which made themselves felt earlier in the war.

► **Censor**—Hushback—Clarifying



## NEW ASSIGNMENTS:

New assignments in the Fifth Air Force based in England include appointment of Brig. Gen. Ralph Hagen (photo) to be deputy commander to Maj. Gen. Lewis Brewster, commander, and Brig. Gen. Theodor R. Quenda to be head of the Higher Command General. Brewster was formerly commanding general of the Army Air Force in the Middle East. General Quenda is a relief pilot on the famous Army plane "Question Mark" that set an endurance record in 1928, has participated in the North African and Italian campaigns.

## Advance Notice

The Germans have from 80 to 90 minutes' advance notice that the Allies are preparing to send large bomber formations out from Britain over Nazi territory because our squadrons check out over England going straight.

General Arnold recently explained to West Coast executives why the Allies are not able to surprise the enemy consistently or to battle them with more devastating effects. "The best we can do is to send several air fleets out in various directions, one or more carrying no bombs at all, leaving the Germans to guess which is the main force."

The reason for our inability to surprise the enemy is detection equipment.

"Our bombers do not usually take off from their landing fields and go directly toward the target," General Arnold said, "discovering as they fly. A bombing bomber in a sailing field is a fighter. Our fighters are not sent over England and they are checked up tightly at the chosen altitude before they head out over the coast."

specifically the status of newspaper reporters and photographers working on aircraft accidents, the instructions explain.

"On several occasions, however, public relations officers have sought to prevent the taking of photographs of wrecked airplanes by news photographers. Some of them have gone so far as to search the contents of newspapers and photographers—be the serious detriment of the U. S. Air Force public relations."

"Censors' smothering, or any such interference with the rights of civilians, can neither be justified or condoned. If confidential equipment were visible on a photographed wrecked plane—a most unlikely occurrence—a plane call to the editor would stop publication of the picture and result in surrender of the negative to proper authority."

The new order also states that "it is the duty of the public relations officer to give the greatest possible service within the limits of security. The press is bound by rigid, self-imposed codes of censorship which it will not intentionally break. The FBI must never try to act as censor."



## MITCHELL'S FIREPOWER INCREASED:

Frontal firepower on B-25 Mitchell bombers is greatly increased by package gun, one installed on each side of the nose. Workers at the Madelon Center of North American Aviation's Kansas division apply protective cellulose coating to keep moisture out of the guns.

## PRECISION PAYS OFF IN PERFORMANCE

More than 50,000 Allison liquid-cooled aircraft engines have gone to the United Nations fighting forces. ★ Into each of these engines have gone the precision and skill amassed by Allison and General Motors during the past quarter of a century. ★ Therein lies the secret of the power of Allison engines and their reliable performance in every major engagement of our Army Air Forces.



### POWERED BY ALLISON:

P-38—Lightning

P-51—Mustang

P-47—Thunderbolt

A-1 and P-51—Mustang

LIQUID-COOLED AIRCRAFT ENGINES

**Allison**  
DIVISION OF



KEEP AMERICA STRONG  
BUY WAR BONDS

Every Landing—Allison—GENERAL MOTORS DIVISION OF THE AER—MOTOR

## FINANCIAL

### American's Move to Acquire Export Revives Franchise Value Problem

First action by domestic air carrier to share in lucrative trans-Atlantic business presents CAB with difficult policy case to decide.

By ROGER WILCOX

The proposed acquisition of control of American Export Airlines by American Airlines represents the first favorable move by a domestic carrier to share in the profitable trans-Atlantic air lines. It also focuses attention on the value of operating rights or franchises in the aviation industry.

American Airlines has offered \$3,000,000 in return for 150,000 shares of common stock to be issued by American Export Airlines. This would give the domestic carrier a 51 1/2 percent interest and effective control of 200,000 shares of common stock to be outstanding for Export Airlines.

American Export Steamship Lines, now owning about 70 percent of the present 20,000 shares of Export Airlines' common stock, would remain with a 34 percent participation. Right adjustments enter into the picture on the exercise of warrants attached to the Export Airlines' preferred but are without material effect upon the new proposed controlling interest.

**Freehold**—If approved, this agreement would give American Airlines a firm foothold in the international field and permit the steamship company to revert itself of control of its growing offspring.

The Civil Aeronautics Board has repeatedly cited American Export Steamship Lines to dispose of control of its airline. This current move may permit the steamship company to do so while retaining a stake in the airline it founded.

The CAB will once again come to grips with the problems arising out of its original divestment order and will be faced with additional complications in the international aviation field. Under Section 400 of the Civil Aeronautics Act of 1938 the Board is required to

approve the consolidation or acquisition of control of any certificated air carrier. The CAB must find any such proposed arrangement in the public interest before it can become effective.

**Book Value** \$4—American Airlines has agreed to pay \$20 per share for the American Export Airlines' common stock. Last available reports would indicate a percent book value of around \$6 per share for this equity. But this was largely represented by development expenditures—a proper but highly questionable asset.

Why is American Airlines willing to pay such an apparent high price for Export Airlines? Simply this: Export has a certificate of convenience and necessity to operate an air route between New York and London. (This line also has made extensive applications for services connecting Washington, New York, Boston and Chicago with the British Isles, France and various Mediterranean points extending to Bombay in one instance and terminating in Africa in another case.)

**Franchise**—In other words, Ex-

port Airlines owns a franchise without which it is impossible to operate an air service across the Atlantic. But American Airlines has also made application (in 1944) for a route from Chicago, Detroit, New York and Boston to European ports. While the applications filed have been marked "second" (in view of the ATC military operating experience they contain), it is understood that they are very thorough and well documented. Further, from all indications, American has not despaired of its hopes in this direction.

A logical explanation to the price being paid may well be that American wants to get on the international air picture NOW and not wait for the protracted proceedings which seem to preface any granting of new certificates of convenience and necessity for international operations. This is particularly true with the intense and involved status of post-war international aviation from the highest echelon down.

**Board's Policy**—How will the CAB view this proposed arrangement? No ready answer is of course available. But the Board (then the Authority) in disapproving of the original TWA proposal to acquire Macquarie late in 1939, went on record as stating: "... it would be clearly adverse to the public interest to allow a certificate of convenience and necessity to be treated as if it were a speculative security to be sold by the holder to the highest bidder, or as if it were possessed of a value of its own, distinct from the legitimate expenses of actually securing a certificate."

Subsequently, in a second action, the Authority approved the TWA acquisition upon a reduction of stock one-third the purchase price. However, Mr. Warner, member, dissenting, observed: "... it is impossible to discover that Macquarie... has had anything other than the certificate, which has a value approaching either the compensation proposed or that now proposed."

It was clear that TWA was mainly interested in the "franchise" or "grandfather" certificate held by Macquarie and was willing to pay for it.

**LAMSA Purchase**—Late in 1943, the Board approved United Air Lines' purchase of a 75 percent interest in LAMSA, Mexican airline, for \$165,700. Of this amount, \$33,000 represented the book value and the balance, \$132,700 was ap-

### Coast Production

Airframe production in Pacific Coast plants last month amounted to 34,915,204 pounds, an increase of 3,546,000 pounds over February, according to Brig. Gen. Donald W. Stiles, aviation procurement district supervisor of the AAF Materiel Command.

Stiles said West Coast production, along with the rest of the nation, reached an all-time peak of 2,700 airplanes delivered in the second quarter

pliable to "branchlines and hood-will."

Back in 1937, United Air Lines wanted to serve Denver on its transcontinental operation in addition to going through Chicago. The Post Office was slow in awarding a mail contract making that service possible. As a consequence, United was forced to pay \$209,900 for the 104-mile segment between Cheyenne and Denver. This route was owned by United Air Lines, then Wyoming Air Express, and in itself was not particularly profitable but United placed a high value in going into Denver and was willing to pay for the privilege.

**Test for CAB—It is with this background that it becomes easy to understand why American is willing to pay the proposed price for control of Export Airlines and why the Board may be faced with a difficult case.**

Conflicting trends in the proposed arrangement appear in other directions as well. Aviation Corp. owns 143,709 shares or 25.01 percent of the common stock of American Airlines and is the major stockholder of record. The holding company also owns 183,977 shares, or 9.26 percent, of Pan American Airways common—representing a substantial stake in that enterprise—retired president of Export Airlines.

**Lebanon on Board—Furthermore, Lebanon Brothers has one of its partners, Robert Lebanon, on the board of Pan American Airways. Another partner of the same investment firm, John M. Stock, is on the directorate of American Export Steamship Lines, proprietor of Export Airlines.**

## American Builds Up Reconversion Funds

American Airlines has provided \$1,756,000 for a reconversion reserve, according to the report for 1943, which shows net profit of \$3,162,668 after the transition process.

Net profit for 1942 was \$3,651,758, including \$636,549 from sale of surplus equipment under government direction. Earnings in 1943 before federal income taxes and the transition reserve were \$3,426,945, compared with \$3,433,126 in the previous year. Amount for federal income taxes last year was \$3,390,000.

## Airline Officials' Stock Sales Listed

SEC reports on dealing of company officers in two securities.

Sale of 3,750 shares of Pan American Airways Corp. capital stock by four officials highlighted the list of February aviation stock transactions reported to the Securities and Exchange Commission by officials and principal stockholders of corporations with securities listed as a national securities exchange.

George L. Egan, vice-president, sold 1,490 shares in lots of 200 shares each on Feb. 2, 3, 4, 5, 7, 8 and 9. At today's prices his sales have a market value of \$43,449. Mr. Egan reported that at the close of February his holdings in Pan American consisted of 730 shares, which have a current market value of \$25,724.

**Sells 650 Shares—Evan E. Young, vice-president, disposed of half his holdings in Pan American through sale of 650 shares, with a present-day market value of \$20,150.**

John C. Cooper, vice-president and assistant to the president, sold 490 shares in lots of 100 shares each to close the month with 1,942 shares of Pan American capital stock in his portfolio. At current market prices, Mr. Cooper's holdings have a value of \$64,792.

El Preston Morris, secretary and general attorney, sold 366 shares, reducing his holdings to 1,000 shares with current market value of \$31,930.

**Columbia President Sells—Sigmond Janus, president of Colonial Airlines, Inc., reported sale of 3,390 common in February, reducing his holdings to 16,610 shares with a current market value of \$124,575.**

Ray C. Shrader, vice-president of Trans Airways, Inc., sold 200 shares of the company's common, leaving his holdings at the close of February at 1,388 shares. At today's prices, Mr. Shrader's shares have a market value of around \$35,284.

**Northeast—Eugene L. Vidal, director of Northeast Airlines, Inc., sold 934 common Feb. 24. His holdings of 33,006 shares at the close of February have a current market value of around \$235,758. R. L. Swenson, controller of Northeast, bought 206 common Feb. 8, increasing his holdings to 290 shares at the end of the month.**

Two reports covering transactions in November, 1943, were filed with the Securities and Exchange Commission by John H. Phipps, director of Eastern Air Lines, Inc., and Joseph P. Ripley, director of United Air Lines Transport Corp. Mr. Phipps reported purchase of 100 shares of Eastern's common through a holding company, which held 8,668 shares of the stock at the close of November. He also reported that 635 shares were owed through a trust. Mr. Ripley reported sale of 300 shares of United's common, representing his entire holdings in the company.

**Republic Aviation—Among the manufacturing group, John J. Daly, director of Republic Aviation Corp., reported purchase of 3,300 common, bringing his holdings at the close of February to 49,316 shares. At current prices, his holdings have a market value of around \$215,900.**

Tom Keller, director of Cessna Aircraft Co., purchased 500 common, increasing his ownership to 510 shares.

Lawrence D. Skill, president and general manager of Bell Aircraft Corp., gave away 600 common and sold 3,160 shares, reducing his holdings to 22,911 shares at the end of February. His holdings have a current market value of approximately \$266,926.

**Bendix—William H. Boughton, controller of Bendix Aviation Corp., sold 100 shares of common, reducing his ownership to 1,900 shares. Henry A. Gossler, secretary, sold 100 shares, leaving him 290 shares.**

Harold E. Crow, president of Air Associates, Inc., sold 100 common to give him an ownership of 1,235 shares at the close of the month.

**Solar Aircraft—Edmund T. Peck, president of Solar Aircraft Co., increased his holdings of common to 10,579 shares through purchase of 500 shares during February. William W. Clery, director, bought 200 shares, increasing his holdings to 700 shares.**

**Aviation Corp.—William F. Wise, executive vice-president of Aviation Corp., reported that in November, 1943, he sold 500 shares of the capital stock, reducing his ownership to 70,700 shares.**

W. L. Maxson, director of United Aircraft Corp., filed a report for January, 1944, showing purchase of 100 common, while Cyril K. Whitman, also a director, reported purchase in October, 1943, of 366 shares.



# Platform for Peace!

Every plane off the assembly line is another plank in the platform for peace. More planes now to hasten the hour of victory. More planes then to guard the peace and fly the commerce.

America surges into the era of flight with many new names carrying the flag. ROHR is one of them... a name which means long lines of sleek motes assembling into completed power plants... thousands of men and women. Production Fighters, trained in special skills to speed giant

Liberators and fleet Lightning into the blue... an engineering skill that has reduced intricate tasks of bomber and fighter production to save thousands of man hours. Rohr works now for victory and nothing else, but stands ready to play a full part in the winning of the peace.



Write our headquarters  
platform for peace security

MEETING TO WRITE THE STORY OF TOMORROW

CHULA VISTA, CALIFORNIA

# Fiberglas\* XM-PF Aircraft Insulation

## GIVES HIGH PERFORMANCE PER UNIT OF WEIGHT

**T**HIS INSULATION is made up of an inert, inorganic material—glass in the form of very fine fibers. Here are the qualities of this new-type insulation:

It is easy to handle and fabricate. It requires no stitching or felting to maintain its form and shape, even under extreme vibration.

Also, the fibers are not subject to rot, mildew, or fungus growth. They need no fireproofing, since they are made of glass and therefore cannot burn.

### Resilient, Flexible, Strong

Because this insulation is composed of very fine fibers, it is also resilient, flexible, and has a strength that is unknown to glass in its more common forms.

Its acoustical uses include installation in pilot's, radio, and navigator's compartments. The noise factor is over 80, indicating in this respect that its performance per pound is high.

### Thermal Uses, Too

Its thermal uses include insulation on hot-air ducts

and fittings on aircraft. It is also used to insulate cargo and troop transport compartments. Here it provides the optimum in insulating effect per pound of weight. It also absorbs the minimum of moisture under extremely humid conditions.

In both acoustical and thermal uses, the advantages of an inert, inorganic insulating material apply.

Fiberglas XM-PF Aircraft Insulation is now available for military aircraft used in densities of 1 lb. and 1½ lbs. per cubic foot. Get in touch with the branch office nearest you. *Owens-Corning Fiberglas Corporation, Toledo 1, Ohio.* In Canada, *Fiberglas Canada, Ltd., Oakton, Ontario.*

## FIBERGLAS

\* U.S. Patent 2,810,415



**Fiberglass, Control Gels, Tapes, Sewing Thread, and Other Fibers are also serving important aircraft uses.**

Branches:	ATLANTA	CHICAGO	DALLAS	LOS ANGELES	PITTSBURGH
	BOSTON	CINCINNATI	DETROIT	NEW YORK	
	BUFFALO	CLEVELAND		PHILADELPHIA	ST. LOUIS

## PERSONNEL

**W. M. "Biff" Morgan**, Oklahoma City Newsperson, has been appointed special representative in Oklahoma for Biff Airways. He will have headquarters at the newspaper's Oklahoma City office. Morgan has served on the executive committee of the Oklahoma Chamber of Commerce for many years and is now chairman. He also served as vice-chairman of the National Aviation Clinic held in Oklahoma City in November. He is a member of the National Aeronautics Association.



**Guido May**, member of the board of directors of Douglas Aircraft Co., Inc., and financial adviser to Donald Douglas, was awarded a three-diamond pin for 15 years' service with the company. Mr. Douglas made the award.

**William Fred Gilbert** (photo) is the new general editor for *American Airlines*, Inc. Primary section head in charge of statistics and IBM operations, Gilbert will now supervise those departments and direct revenue marketing, public and investigations, files and records, and the bulletin and mailing units. He will report to Vincent J. Long, assistant treasurer and secretary. R. F. Olson replaces Gilbert.



**Harry E. King**, for more than 20 years civilian inspector of aircraft for the Navy, is now chief of inspection at Allentown division of Consolidated Vultee Aircraft Corp., succeeding Walter H. Barling who is transferring to the Fiat-Worth division.

**James S. O'Brien, Jr.**, secretary of Fairchild Camera and Instrument Corp., has been inducted into the Army. A aviator will be chosen by the Fairchild board of directors.

**Dr. V. N. Knyshov**, for many years professor of metallurgy at the Carvage Institute of Technology, and recently chief metallurgist of Lockheed Aircraft Corp., is now with the Development and Research Division of International Nickel Co., New York.

**S. R. Newman** (left) has been appointed acting western sales manager of United Air Lines and **Howard J. Meridian** (center) becomes acting eastern sales manager for United at San Francisco, serves in the Chicago headquarters to supervise sales activities, while Newman assumes Meridian's duties at San Francisco. The changes are due to the long-term vacancy of the position of eastern sales manager, held by N. B. Rader who on military leave at a Marine

**S. R. Newman** (left) has been appointed acting western sales manager of United Air Lines and **Howard J. Meridian** (center) becomes acting eastern sales manager for United at San Francisco, serves in the Chicago headquarters to supervise sales activities, while Newman assumes Meridian's duties at San Francisco. The changes are due to the long-term vacancy of the position of eastern sales manager, held by N. B. Rader who on military leave at a Marine



Newman Meridian Burke

**Captain Warren Burke** (right) becomes acting district traffic manager for United in San Francisco. He has been assistant district traffic manager and has been in air transport since 1935, serving for two years in naval aviation. He joined United in 1936.

**Howard W. Chase**, formerly advertising and sales promotion manager



### OLD TIMES AT FAIRCHILD

Fairchild Camera and Instrument Corp.'s president, **James S. O'Brien, Jr.**, awards certificates and diamond-encrusted pins for 25 years' service to **Robert A. Douglas**, general works manager, and **Joseph P. Smith**, New York plant manager. C. A. Harrison, vice-president in charge of sales, who has completed 15 years with the company, also received an award. Fairchild manufactures aerial cameras and precision aviation instruments.

of Lockheed Aircraft Corp., has become assistant to the president of Mobil Oil Petroleum Corp., Los Angeles.

**Carl O. Samuels** (photo) has been appointed contracts manager of the Ranger Aircraft



**Charles James O. Hughes**, USN, has been appointed assistant Bureau of Aeronautics representative at the Glenn L. Martin Co., in Baltimore.

**Admiral Arthur M. Mason**, former Portsmouth Naval Air Station, has been cited by Secretary of War **Henry L. Stimson** for his service in saving lives aboard a plane that crashed near Belmont, New York, and died, just a year ago.



"Your conduct on this occasion was an inspiration to the services and contributed materially to the rescue work."



**James S. O'Brien, Jr.**, president of Fairchild Camera and Instrument Corp., has been inducted into the Army. A aviator will be chosen by the Fairchild board of directors.

Malvin T. Brodman has been appointed manager of aircraft service for the air cargo department of United Air Lines. He will represent United on the surface of its transportation committee of Air Corps. The Brodman has been area manager for the air cargo department in Chicago. He is on the board of directors of the Aeronautical Club of Chicago and chairman of that organization's Air and Express Committee.

Fred E. Miller has been appointed manager of Adair Precision Product Corp.'s Customer Service Dept. at Burbank, Calif. Since October, 1942, Miller has been chief of Adair's research and testing laboratories. In his new position he will be responsible for management and service of Adair hydraulic equipment installed on nearly every type plane in operation from domestic and foreign air lines. Before joining Adair he was a cadet in the U. S. Army Air Force.

Map, T. O. Van Allen is the new consulting officer for the Army Air Forces at West Aircraft Co., Troy, Ohio. Major Van Allen has served at the Building Army Air Field and at Wright Field.

Ernest Gene American Airlines pilot flying on the trans-Atlantic routes under contract with the ATC, has completed the manuscript of his new book, *Passion Unknown*, a fictionized story of his experiences in the north for the ATC. Viking will publish the book this spring.

Ted Cassen has replaced E. H. Peterson as chief of materials for Consolidated Values Aircraft Corp., Tucson division. Peterson is now with the New Orleans division.

Ernest A. Mason, production superintendent of the Ryan Aeronautical Co., was presented one of the 1942 Chamberlain Awards for Outstanding Industrial Achievement. A gold medal was presented to Mason in recognition of his successes in speeding up production at Ryan.

Arno Laidner, chief engineer of Aero Insurance Underwriters, has been named assistant manager. Fred N. Deery has just been appointed assistant manager in charge of administration and Donald M. Stewart becomes assistant manager in charge of underwriting.

J. V. McClure has been appointed chief inspector of Consolidated Values Corp.'s Fort Worth Division, transferring from the San Diego di-

vision, where he was general supervisor of B-24 and C-47 repair and final assembly inspection. McClure has participated in construction of small rental plants for many years.

Officers elected at the New York Section of the Institute of Aeronautical Sciences held in New York were Dr. Frederick C. Tomlinson of New York University, chairman; James Laidner of Aero Insurance Underwriters, vice-chairman; and Edward J. Poles of American Airlines, secretary. Members of the Executive Committee are Dr. A. Paul Haring of Polytechnic Institute of Brooklyn; Stephen J. Zand, Sperry Gyroscope Co.; C. Pappas, Republic Aviation; and Donald Lloyd, Eclipse Aviation.

F. W. Lorchfield has been selected chief committee officer and chairman of the board of Goodyear Tire and Rubber Co. All other executive officers including R. A. Thomas, president, were re-elected.

G. C. Woodward, secretary of Ryan Aeronautical Co., has been elected a vice-president. He will continue his duties as secretary and will also act as assistant treasurer.

Canadian Pacific Air Lines has announced the following personnel changes: E. F. Seagans has been named inspector of agencies with headquarters at Montreal. He will coordinate and administer traffic and agency accounting procedures. M. R. Stamp is tariff compiler, re-



Stephen

Stamp

sponsible for the filing of all tariffs and schedules. A. McQuinn is assistant to the general traffic manager and will supervise the company.



McQuinn

Mason

tion and maintenance of all traffic materials and traffic training programs and she will be responsible for installation and supervision of all

mechanisms and passenger loading procedures for the system. C. W. Baid, regional traffic manager, eastern lanes, will supervise and assist district traffic managers.

Conrad Henry R. Horney, USAF, has reported for duty to the Flight Statistics Section, Flight Division, of the Navy's Supply Staff of naval operations for Air. He will serve under Capt. S. H. Warner, head of the Flight Statistics Section in charge of research statistical studies, accident prevention and safety education.

Ralph E. Owsler has been appointed assistant to the vice-president of the aviation division of Evans Products Co., with his headquarters at Kansas City. He will have charge of all aviation studies. Owsler joined Evans last year as an air cargo specialist and has made two trips to Alaska to train military personnel in cargo loading methods. He joined TWA in 1935 and has since been with Lockheed and other aviation companies. In addition to his duties he is a consultant for the Southern California University Air Transportation and Air Express school.

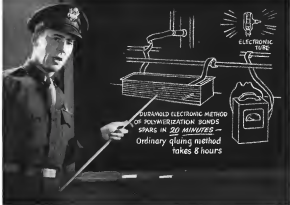
Geoffrey Cox has been named vice-president of McDonnell Aircraft Corp., in charge of Memphis operations, with responsibility for all Memphis functions except fiscal. Cox is executive vice-president of M.A.C. and has new duties as additional. His headquarters will be in St. Louis. Lawrence Smith, vice-president and treasurer, has responsibility for Memphis fiscal division.

Edward D. Hamlin, formerly with Bell Aircraft Corp., has been appointed director of industrial relations of the Graham-Page Motor Corp., Detroit.

Cassius Pappas, Republic Aviation Corp. engineer, will be awarded the Wright Brothers Medal by the Society of Automobile Engineers at the annual dinner April 18 at the New Yorker Hotel. Pappas achieved this honor by presenting the best paper on aerodynamics and structural research during 1942. He will receive a bronze plaque, the gold medal and a certificate.

Paul L. Underhiller and George M. Macchiaso have been elected members of the Board of Directors of the Brown Instrument Co., Philadelphia. Macchiaso is vice-president in charge of engineering of the company, a division of Minneapolis-Honeywell Regulator Co., and Underhiller is vice-president in charge of production.

Paul L. Underhiller and George M. Macchiaso have been elected members of the Board of Directors of the Brown Instrument Co., Philadelphia. Macchiaso is vice-president in charge of engineering of the company, a division of Minneapolis-Honeywell Regulator Co., and Underhiller is vice-president in charge of production.



## Electronics Now Used in Making Aircraft Spars

Fairchild's Duramold engineers have harnessed the electron to a new and urgent task—the manufacture of spars, backbones of our airplanes.

Until plywood techniques for joining thin layers of wood could not be applied in making heavy wooden aircraft components. New methods were needed and in a hurry.

Fairchild engineers found the solution in electronic energy, employing radio high frequency with an apparatus similar to that used by radio stations in

sending out short wave broadcasts but designed specifically for heating the plastic adhesives efficiently.

Heat penetration by radio frequency, coupled with the use of special plastic adhesives, now takes out better, stronger spars. Production time has been reduced from hours to minutes. The use of electronics has become standard procedure in this phase of Fairchild's Duramold process for building plywood structures—another instance of how Fairchild engineers apply "the touch of tomorrow in the planes of today."

BY U. S. WAR BONDS AND STAMPS

**Fairchild Aircraft**

Division of Fairchild Engine & Airplane Corporation, Dayton, Ohio—Burlington, North Carolina

# Trail Blazing in the Skies

## PIONEERING NEW METHODS



### HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE AIRCRAFT INDUSTRY

1. By constructing rubber-assemblies to manufacturers' specifications.
2. By designing parts for all types of airplanes.
3. By re-engineering parts for mass production.
4. By building complete airplanes and airships.
5. By extending the facilities of Goodyear Research to aid the solution of any design or engineering problem.



**A SURER WAY TO MEASURE STRUCTURAL FATIGUE** developed by the Goodyear Aircraft Corporation is the Resonance Fatigue-Testing machine. This ingenious device employs electric impulses to induce the natural vibration frequency of aircraft parts under simulated operating conditions, making it possible to determine fatigue characteristics with a high degree of accuracy. It can duplicate most types of fatigue, including alternating or pulsating stresses in structural parts made of steel, aluminum, or other alloys . . . whether they include riveted, bolted, or welded joints. Its utility is evidenced by its use in the U. S. Bureau of Standards.

## BUILDING PROVEN AIRCRAFT PARTS



**THE DEADLY GRUMMAN AVENGER** for which control surfaces have been built by Goodyear Aircraft Corporation. Thousands of Avengers now serving at the battlefield are equipped with Goodyear-built components and the great record of these ships bespeaks Goodyear's ability to meet the most exacting manufacturer's quality standard. This stems from Goodyear's 30-odd years' experience in acoustics, a career notable for its many contributions to the improvement of aircraft. In addition to building subassemblies for many leading airplane manufacturers, Goodyear builds both complete airplanes and airships.

Let's all  
back the attack  
with WAR  
BONDS

**GOOD YEAR**  
AIRCRAFT

## April Output Expected to Drop After March Peak of 9,118 Planes

Changes in tactical models and new draft regulations to being slight recession this month, Wilson forecasts; no shortages likely in needed tactical warcraft.

By SCOTT HERSHEY

Record-breaking production of aircraft last month was made the subject of an event by the Aircraft Production Board, which assembled its members, headed by Charles E. Wilson, to discuss the output with newsmen and to point up the fact that the unit output of airplanes probably reached its peak for the year in March with a total of 9,118.

The aircraft manufacturing industry went over \$600 units for the first time and also, in terms of airframe weight, established a new high when the industry's output exceeded for the first time the 100,000,000-pound mark, increasing by more than 9 percent over

February, the previous high, to attain a total estimated at 101,400,000 pounds. This compares with February's weight output of 93,000,000 pounds, which encompassed 8,260 airplanes.

■ **May Fall Back in April**—Significance of March production was further underlined by the disclosure that the April production probably will fall below March's unit output, and the predicted production this month probably will hold about even with March.

Members of the Aircraft Production Board emphasized that they expected future schedules for the year to be maintained, although not without some difficulty.

At the moment, however, Wilson said in answer to a question that there are no important limiting factors to schedule-making.

■ **Schedule Changes**—Wilson did say, however, in his personal announcement of the March record, that the necessity of constant engineering changes to meet combat requirements would make it difficult to continue meeting future schedules, particularly in view of the probable losses of the industry to Selective Service in the under-35 age group.

Some newsmen at the conference were somewhat puzzled by Wilson's repeated reference to the cut-back in inner production, an element of the production program which is not new and which has been brought out before by various production officials. One of the factors which will contribute to April's reduced unit output is the further reduction of various trainer types.

■ **Tactical Types**—Wilson said, in line with recent strategic emphasis, 62.5 percent of the total number of aircraft produced last month were tactical types, representing bombers, fighters and interceptors.

In this connection, he pointed out that virtually all aircraft companies producing these much-needed types met or exceeded their schedules. Output of four-engine bombers exceeded March schedules by 5 percent, while the industry topped the whole month's schedule by 1½ percent. The schedule on Boeing's B-29 Superfortress was substantially met.

■ **Convair's B-32**—Asked about the program on Consolidated Vultee's B-32 bomber, Wilson turned to May Gen Oliver P. Echols, who, however, turned again to the assembled newsmen, and said nothing.

A question as to reasons for the industry being ahead of schedule in March brought from Wilson the comment that the aircraft companies are more familiar with the types they are making, the program of standardization which has been in effect for some months is showing results and that fewer man-hours are required now for the production of various non-used types.

■ **No Cut in Needed Models**—The fact that the April unit output will probably be lower March did not mean there will be any reduction in needed combat types but it was

indicated that there would be increased emphasis on types most required by the military for future operations.

Wilson said the 1944 aircraft production program is exactly in accordance with plans previously laid and he added that the production system is now meeting requirements, with the pipe-lines of supply for the armed services constantly full.

■ **Rebound**—Those at the new conference who remembered the muddled condition of the aircraft production program when Wilson came to Washington to take it over about a year and a half ago when output materials was the No. 1 problem were virtually unanimous in their comment on the changed situation which finds aircraft production above schedule and with not too much concern that future schedules will be met—always barring, of course, the unforeseen.

Indication of the importance attached to the March results was seen in the fact that Wilson presided, and that May Gen Oliver P. Echols, Rear Admiral M. D. Taylor, Jr., and Myron Tracy, acting member and recorder, were on hand, with a number of other Army and Navy officials and WPB officials.

Only members not present were Lt. Gen. William S. Kauffman and F. Wright, director of the Aircraft Resources Control Office and recorder of the Aircraft Production Board, both of whom were out of Washington on missions.

## New Glider Order

Following recent announcement of a new contract for YCG-11A, Waco gliders by Ford Motor Co., Northwestern Aeronautical Corp., St. Paul, reports an order for the same model. It is completing a series of the CG-4A. The company is also doing most of the wood-working for the CG-4A in addition to final assembly.

## May Cut Work Week

Aircraft plants in Montreal are moving toward a reduction from the current 34 to 66 hours weekly to a 48-hour week under a new union contract. Norman Bell, plant manager of Norbury Aviation, Ltd., Montreal, indicated the shift is planned would involve a gradual elimination of overtime and that no definite date had been fixed for the new schedule.



CONVAIR PH-5 GETS ITS WINGS!

Workers in final assembly at Consolidated Vultee's plant in New Orleans are shown mating the wings of a Catalina patrol bomber to the fuselage. Convair is producing Catalinas for the Navy and our Allies.

## Materials Control Plan Started by C-W.

Installed at Buffalo plant after successful test at Columbus.

The materials control plan that played a large part in getting the C-47A, (C-1) plant of Curtiss-Wright into scheduled-meeting production now is being installed in the Buffalo plants of Curtiss-Wright.

Called the "Eliminating" plan it is designed to eliminate shortages of parts and materials in final assembly departments through scheduled stocking of supply crates. Shortages will be reflected in the crates long before they are reflected on the assembly lines.

■ **Elimination of Delays**—Two major goals are accomplished through

the plan, namely elimination of delays on the assembly line and the permitting of fully efficient use of parts manufacturing equipment and tools. That is one simplification, because the plan is intricate and provides many general improvements.

It is being installed under supervision of R. J. Harrington, former vice-president of Lockheed Aircraft Corp. who last fall was elected vice-president of Curtiss-Wright Corp. in charge of materials. He recently completed chargeover to the new method at the Columbus plant, which Washington reports say is meeting schedules with top-notch planes.

■ **Shortage Problems Averted**—While the new system is being installed, some departments at Buffalo plants are finding the parts shortage so acute they are having difficulty maintaining operations but "when the plan is perfected in a few weeks, part shortages on the line will be eliminated and a much more efficient system of control will prevail," a company spokesman said.

It should be pointed out that the nation's aircraft production program is as well under way that efficiency systems now can be installed even though they might mean some delays in schedules. The Harrington plan is another manifestation of relief that in a few months will mean an even greater production with lowered man-hour requirements and therefore constantly improving production factors. Last year a



DOUGLAS WING TANKS TESTED.

Every stress to which an integral wing tank might be subjected under heavy loads in rough flight is applied here to an integral tank (which has the appearance of a bridge girder) of a Douglas C-54. Shear and compression stresses are applied by hydraulic jacks at the Douglas research laboratory in Santa Monica, Calif.





# The Dilemma of the Aviation Advertising Buyer

THREE ARE THE PUBLICATIONS listed in the *Aviation Business Paper Section* of *Standard Rate and Data* today. (In 1949 there were 2.)

They offer circulation ranging from 2,500 to 251,000. Their sales representatives are many and varied—creating a perplexing challenge to those responsible for the intelligent building of an advertising program that will reach the true buying influences of aviation.

We believe that a simple definition of the aviation industry with relation to current and post-war market opportunities may help clear the air. Each of the 16 publications may then be viewed in proper marketing perspective and avoided on the verge of the serious it renders.

## Aviation's Market Structure

There are three basic divisions of the aviation industry: Military aviation, air transport and private flying.

Today the dividing lines between them are almost indistinguishable—so that current sales opportunities are all essentially military.

But after the war, this will change. Air transport and private flying will again become specialized marketing areas distinct from military aviation.

## Aviation advertising has a dual objective today

Even as aviation suppliers concentrate on their first job of winning the war—they must lay the groundwork for the changed marketing conditions of peacetime.

Thus sound advertising planning today embraces their essential considerations: Continuing coverage of the military market—for military aviation has always been, and for some time probably will continue to be, the industry's best customer measured in dollars. Through coverage of air transport, which joins the railroad, marine and motor transport industries as one of our great public carriers. Sound coverage of private flying—primarily the fixed base operators and distributors who will sell and service private planes, distribute parts and accessories and encourage flying through flight instruction and auxiliary services.

## Functions of the Industry

Manufacturing, operation, maintenance and distribution—often loosely referred to as divisions of the industry—are not divisions but functions.

They are closely interrelated functions within each of the three basic divisions.

This interrelationship is of the utmost sales importance. For manufacturing executives—designers, engineers and production men—are concerned not only with the building of planes, engines and components, but also with the operation and maintenance of their products. Conversely, operation and maintenance men exert important influence on the design and engineering of the planes they will later buy and service.



For example, the Douglas DC4, the Boeing Stearman, the Pan American Clipper are products of the combined engineering abilities and operation and maintenance experience of the airlines and the manufacturers. Likewise military aircraft are joint products of the manufacturers and the air forces.

In the same way the fixed base operator has an important stake in the design and engineering of the planes he will sell and service.

Thus in all three of aviation's fields, no sharp lines separate the functions of manufacturing, operation, maintenance and distribution.

These basic considerations provide the key to the sound and adequate building of an aviation advertising program. They clearly indicate the importance of a broad-coverage industry publication to act as the foundation medium of your advertising schedule.

## Foundation Coverage—the marketing function of Aviation magazine

Since its first issue in 1918, *Aviation's* editorial policy has been the serving of all the industry's interlocking interests.

For example—*Aviation's* Design Studies are of vital interest not alone to the designer but also to engineers, production, operation and maintenance men, fixed base operators and other groups.

Through *Aviation's* breadth of editorial coverage, not only maintenance men, but also engineers, designers and production builds, operators and distributors keep abreast of maintenance developments.

The stories of new planes, new equipment and new power plants are important to all management men, regardless of their field or function.

Embodied within *Aviation's* average issue of 115 editorial pages are 87 pages of first interest to maintenance men—56 to manufacturers—44 to operation executives—44 to distributors. So it is throughout all branches of the industry.

That is why *Aviation* is read by over 42,000 paid subscribers of multiple interests.

And that is why *Aviation* maintains the largest staff of editorial specialists in the field.

Thus *Aviation's* marketing function is clearly defined—to serve the multiple interlocking needs of the men who are responsible for the designing, engineering, production, merchandising, regulation, operation and maintenance of aircraft.

Because aviation has entered the most important period of development in its history, McGraw-Hill last year began publication of two new aviation magazines.

Their purpose—to intensify information service to meet the increasing demands of war and peacetime.

## Aviation News—to intensify top-management coverage

The swift developments in aviation today demand week-to-week, authoritative presentation of all the news of momentous importance. Aviation leaders and planners are the busiest men in U.S. industry today, and they must keep pace with all significant news developments. To meet this need, we began publication in August 1943 of the only weekly in the field—*Aviation News*. The urgent demand for *Aviation News* is indicated by the fact that 3306 of the most influential men in aviation have subscribed to this new-type publication within its first eight months.

## Air Transport—to

for specialized coverage of air transportation. As air transportation takes its place alongside our other great carriers of passengers and cargo, there has grown an urgent need for a publication devoted wholly and exclusively to its special interests. To meet this need we began publication in September 1945 of *Air Transport*. Within seven months it has become the strong national voice of the industry. From the men who guide the progress of air transportation—its operating and maintenance executives, its financial interests, its government and civilian authorities—has come immediate recognition of the important editorial leadership of *Air Transport*. To date 2354 of these men have paid over \$36,000 to keep pace with the developments of air commerce through the pages of *Air Transport*.



We believe that these three magazines—*Aviation*, *Aviation News* and *Air Transport*—offer the most effective method of reaching the true buying influences of the aviation industry—now and in the critical period ahead.



**AVIATION • AVIATION NEWS • AIR TRANSPORT**  
McGraw-Hill Publishing Co., Inc. 220 West 52nd Street, New York 20, N. Y.



#### AILERON LOCK DESIGNED BY MARTIN ENGINEERS:

A small C-shaped plastic casting weighing only 4.88 pounds has been designed by engineers of Glenn L. Martin Co. to lock ailerons on the Navy patrol bomber in the air. It is fabricated from BME-7025, Macomated Fibre Barre Phenolic, and engineers estimate it would have weighed approximately 1.30 pounds had it been designed as a metal casting.

chanceover each as this would have been impossible, or at least impractical.

**Dispatcher System**—Under the system in effect before, hundreds of "dispatchers" were employed to expedite the flow of parts. If department "A" found itself without a certain part with which to maintain production, a dispatcher would be sent to the parts-manufacturing division. This division then would quickly change the dies and set-up of one or more machines to produce enough parts to meet the shortage in department "A." By that time department "B" would find its flow of parts shut off, and a shortage there would result in sending another dispatcher with a demand for immediate production of that part. So, rather than continue working department "A," the parts-manufacturing division would repeat the set-up changes. With dozens of departments clamoring for parts in a vicious cycle of shortages, the result was almost constant changeovers. Many dispatchers now can be utilized in direct production work.

With the Harrington plan, the parts-manufacturing division, once it changes its machine dies and set-ups, produces enough of one type of part to justify the changeover. It produces hundreds of parts, instead of dozens, and creates a surplus of those parts in the supply bin, eliminating assembly line shortages as long as

the supply room organization functions with any degree of efficiency.

#### Splits Buffalo Unit

Curtis-Wright is separating its Buffalo airplane division into two operating units, to increase operating efficiency.

Charles W. France, recently transferred to Buffalo from St. Louis, will continue as manager of the airport factory, to be known as the Buffalo plant. John J. Lee, former warplane manager of the plant, will become manager of the Kearney plant. Both units will manufacture production of P-40 Warhawks and C-46 Commandos and the Buffalo plant will incorporate activities of the modification center.

#### Ryan Re-elects Board

Stockholders of Ryan Aeronautical Co. re-elected all directors at a meeting in Los Angeles. Re-elected were E. Claude Ryan, Earl D. Prudden, G. C. Woodard, Frank M. Phillips and C. Arnold Smith. Officers elected for the coming year included T. Claude Ryan, president and treasurer; Earl D. Prudden, vice-president; Eddie Molloy, vice-president; G. C. Woodard, vice-president and secretary; and J. C. Noakes, controller. Woodard, former secretary, was raised to the vice-presidency.

#### Girdler Asks Plans For Reconversion

Convair lead declines industry new law capacity for processing war and preparing for peace.

Industry has the capacity to continue the war and plan for post-war conversion at the same time in the opinion of Tom M. Girdler, chairman of Consolidated Valve Aircraft Corp., who called upon American manufacturers to assist in providing peace-time prosperity. Regarding the aircraft industry specifically, Girdler said that he could not believe the American people will permit "the most potent weapon in our arsenal of defense to return to its pre-war status."

**A. Addresser St. Louis C. C.**—The maintenance of an ample number of military airplanes is America's best guarantee of a lasting peace," Girdler said in an address before the St. Louis Chamber of Commerce. "No false sense of security can be allowed to interfere with its realization. With peace so assured, the airplane will then be able to fulfill its transportation role in the air age that is now upon us."

#### Beech Arranges Big Reconversion Loan

Fifty-million revolving credit to be used in completion of war contracts but which will continue available in the event of congressional action to permit speedy reconversion to peacetime production, has been set up for Beech Aircraft Corp. by 36 banks.

Beech has a large subcontract for production of complete aircraft assemblies for a new type Douglas combat airplane, as well as its own twin-engine trainers and two types of personnel transports of its own design.

**30-Month Credit**—The credit, a 30-month grant, was described as the largest private contract ever drawn and sponsored by Midwest banking institutions. Provisions for continuation of the credit in the event of cancellation will release a major portion of Beech's investment in the completed production for reconversion purposes with little delay.

Beech deliveries in 1942 totaled \$136,000,000, more than double the 1943 figure of \$56,000,000.

#### Reynolds Develops New Plane Alloy

Lightweight steel, as tough as steel, in quantity production for warbirds, occupies reveals.

Development of a new aluminum alloy, said to be as tough as structural steel, but so light it will save many pounds in airplanes made from it, has been disclosed by Reynolds Metals Co.

R. S. Reynolds, president of the company, said the new alloy is being produced in large quantities for the construction of military aircraft. The alloy, designated as R-304, is no lighter by volume than other alloys used in airplane construction, but it is so much stronger that the new planes can be made of thinner and consequently lighter sheets.

**Armor Plate**—The alloy is so tough that it also can be used for armor plate in place of steel, which is three times as heavy, volume for volume, but not as effective in deflecting bullets, according to tests made by Reynolds.

New planes, designed and engineered around the alloy, Reynolds said, can carry greater payloads than similar planes made of ordinary alloys. Bombers, for example, will be able to carry greater bomb loads or more guns or the weight savings may be utilized to increase the speed of any type of plane.

**Stronger than Steel**—As for the alloy itself, its inventor, Thomas L. Frittlein, Reynolds metallurgist, worked on about 30 successive batches of metals, each modified from the previous one, before he hit upon R-304 about a year ago.

R-304, actually an alloy coated with another alloy to make it corrosion resistant, tested out to a higher yield strength than structural steel and its yield strength was found to be substantially higher than the yield strength of the aluminum-clad alloy generally used in aircraft construction.

In addition, Frittlein said, the new alloy can be formed, hammered, rolled or drawn, and then heat-treated, to develop maximum tensile properties in the hardened condition with a higher hardness that increases its resistance to fatigue failure.

**Easy to Fabricate**—Because it is easy to form and produces no difficult manufacturing problems, Reynolds engineers expect the new

alloy to speed airplane construction.

Since the start of the year, a Reynolds plant has been manufacturing quantities of the alloy and in another plant presses have been stamping and peeling for war airplanes. The entire production is available now only for war use.

#### Mengel Diversifies For New Orders

The termination problems already confronting companies holding large subcontracts is pointed up in the annual report of Alvin S. Mengel, president of the Mengel Co., large supplier of bomber products.

"Since the termination of the aircraft subcontract, which was our largest single war project, we have had to enter several largely unrelated fields to procure war business," and Vee.

**Record Sales**—The company, which still is supplying a large volume of corrugated shipping containers for airplane parts and aircraft and engine packing crates, reported record sales of \$37,734,000 for 1942, with net profit after charges and taxes of \$745,000, which is \$32,000 less than 1941, despite increased sales.

#### Goodyear Expands Phoenix Plant

Enlargement of Goodyear Aircraft Corp. plant at Phoenix, Ariz., is under way in preparation for expansion of facilities for heavily increased modification work and construction of parts for Navy bombers.

Raymond Hudson, general superintendent, said personnel at Goodyear would be increased from 5,000 to 6,500. A new building, 300 by 250 feet is being constructed and new parking facilities are being added to the plant aiming to handle more planes.

#### Russia Gets 8,800 Lend-Lease Planes

More than 8,800 airplanes have been sent to Russia from the United States, either by air or by ship, according to Leo T. Crowley, Foreign Economic administrator.

**Supply Shipments**—Since the start of the aid program in October, 1941, more than 8,800,000 tons of supplies was shipped from the United States. The tonnage figures do not include 4,899 planes ferried all the way by air from the United States to the Soviet Union.



#### TRAINING AIDS BUILT BY NAVY

This section of the Bureau of Aeronautics' Special Demons Building in Washington, where scores of aids to assist training have been received and built, shows a window of the Curtiss Helldiver, a gunnery training device, and exact scale models of friendly and enemy planes. The cockpit model has a completely equipped instrument panel.

## CAB Insurance Study May Bring Rate Cut, End Foreign Re-Insurance

Aviation underwriters facing possibility of legislation to stop practice of sending U.S. commercial and technical data abroad.

By IRLAINE STURMFIELD

Aviation underwriters probably will revise their rates downward and seek re-insurance services within the United States as a result of the Civil Aeronautics Board's recent "Study of Aviation Insurance." This is the gist of diverse opinion in aviation circles that week.

Underwriters take the possibility of legislation to stop the practice of re-insurance abroad. The procedure involved is foreign re-insurance paid out of the country information giving advantages to competitors against the commerce of the United States and it impedes the national security in war strategy. Aviation News learned that information leaks are mere

straw men, more represented in the Board's report.

**Bill Introduced**—In the background of today's aviation insurance picture is a bill before Congress, introduced by Joseph Bailey of North Carolina, which would exempt the entire insurance business from operation of the Sherman and Clayton anti-trust laws. Federal control over insurance is extremely weak, but defeat of this bill would spotlight alleged collusive insurance rate setting by the aviation underwriters. The bill was offered under pressure of the insurance industry, according to sources responsible for CAB's report.

Senator Joseph O'Mahoney of

Wyoming is taking testimony on the bill in Judiciary Committee, which he says will show that "aviation insurance is wholly within the control of these vast national and international combinations of insurance companies, while the public interest is protected by neither the states nor the federal government."

CAB's study says that in 1949 over 96 percent of the aviation insurance reported to the New York State Insurance Department was written by three underwriting groups: Aero Insurance Underwriters, Associated Aviation Underwriters, and United States Aviation Underwriters.

**Appeal Pending**—Meanwhile there is pending before the Supreme Court an appeal from a decision by the Federal District Court in Georgia. The Georgia court decided that the anti-trust laws do not apply to insurance. The insurance industry would like to get Congress to act, by passing H-1342 and a companion bill in the House, that the insurance business is exempt, before the Court gives its decision.

Think the present set-up of aviation insurance could be upset by the Congress or the Supreme Court or both. The court has been studying the insurance case long enough that observers conclude the pas-

sages are flaring at a knotty problem.

**ATA Memorandum**—The Air Transport Association is taking a moderate view of the CAB report. ATA's memorandum on the subject to operators simply states the report on costs and other statistics and says a review of rates by the underwriters seems to be in order. Several members of the air transport industry, however, are complaining bitterly against insurance practices. Especially some medium and small companies take exception, they who have few or no accidents pay the highest insurance rates in traffic per passenger mile while the large carriers, who have the bulk of fatalities, have the low rates. These data are shown by tabulations in the report.

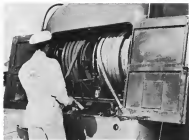
Industry men are that CAB itself, will not call for insurance legislation, but plenty of air transport men and Congressmen are ready to do so. Any new bill is likely to get strong emphasis against foreign participation in insurance and re-insurance and against mutual agreements on rates among the underwriters. The airlines would like to feel that they can bargain effectively in the insurance market place—a feeling some do not now have.

**Insurance Men Absolved**—But nobody in the picture is inclined to condemn the insurance men. The Board's report does not find them at fault on any count. In fact it partly justifies their rates and their re-insurance practices in view of the precarious risk positions they have occupied.

Speakers in the Board say no one wants to drive out the present underwriters, whose experience and resources are valuable. Top managements in the underwriters are said to resent government interference, because they have had their own way so long.

But the working insurance groups seem to realize the necessity for getting along with federal authority which, for better or worse, is responsible to the public for economic rates and indirectly for the economic liquidation of air lines.

**CAB Insurance Plan Awarded**—It is easy to read between the lines in CAB's report and in Board Member Gerald Ryan's testimony before the Senate Judiciary Committee that the Board does not particularly want the insurance industry more than a year ago by Rep. Clarence Lea in H.R. 1962. This



UNITED DEVICE SAVES TIME FOR GAS TRUCKS:

A device developed by a United Air Lines mechanic to aid in recording fuel hose on gasoline trucks is said by that company to save two-thirds the time formerly required for that operation. The device, which helps later to support the truck's weight while doing the job, E. C. Berry, lead mechanic for United at San Francisco developed a two-prong brace to support the crankshaft.

bill would authorize the Board to provide air insurance and re-insurance when it could not be had at reasonable rates. The Board apparently does not wish to assume any such responsibility. The airlines don't like the idea either, they would rather work along with private insurance than get weighed up tighter in government controls. It is doubtful, of course, that Mr. Lea ever intended the Board actually to engage in insurance. Probably he was mainly threatening the underwriters. Whether or not downward adjustments were reported made at once.

Many informed persons supposed that CAB, in releasing its insurance study, was reporting in accordance with custom and a specific request on the Lea bill. Actually, CAB's study was begun before Mr. Lea asked for a report. First suggestion that air insurance be investigated cropped up during the famous NACA committee's inquiry into airline accident testimony on accident revealed complaints that damages had not been adequately covered in underwriters' settlements.

**Possible of Error**—The Board is expected to hear from the underwriters at any moment that its figures are inaccurate. Attorneys

and economists who wrote the report believe they have put the based on solid ground; they claim that they gave the insurance men the long end of all doubts. But they admit figuring it not an exact science.

Foreign insurance (the Board refrained from naming England and particularly Lloyd's of London) has been so manipulated as to divert traffic to certain lines in the merchant marine. It probably can be so manipulated in post-war air transport. But the air value is not now, and will not be for some time, great enough to matter much, any way or the other.

In the long run, the airlines and other users of airplanes have nothing to worry about, say informed persons consulted on this subject. The air transport industry has plans drawn up to bring mutual companies into a so-called "self insurance" plan—if necessary. For example, the division of personnel between underwriter and reinsurer may be in various proportion to the division of risks between them, because the reinsurer lacks both a common sense to the underwriter and an adequate business. It's complicated and the answers sometimes depend on who does the figuring.



VICTORY AIRCRAFT'S CONVERTED LANCASTER;

Two views of a converted Lancaster, built for Trans-Canada Air Lines' trans-Atlantic mail and passenger service at Victory Aircraft Ltd., Toronto. Removal of nose and tail turret has given the four-engine craft a definitely pointed nose and tail. The bomb bay, shallowest than in the service version, is held by auxiliary fuselage tanks. The plane is compensated to carry 2½ tons of mail and ten passengers. Five narrow upholstered seats are on each side of the aft

compartment. Passenger cabin undisturbed will be seen in the rear view. Camouflage is located to the top of the plane. Removal from wings and lower part of the body is expected to increase the craft's speed by 15 to 20 mph. Cruising range on the converted version has not been released, but a service Lancaster recently flew from Winnipeg to Toronto in just over three hours. Work is progressing at Victory on the second of five of these converted Lancasters that go to TCA.



"We must some day be able to see enemy targets through the thickest fog and the blindest night... a single American soldier must be made a match for an enemy tank... we must be able to land armies upon every kind of fortified coast... we must send fighter planes seven miles into the sky, if need be, to smash enemy bombers from above..."

Then and the methods of military strategy, set so long ago, living things of war that were out of this world... the "impossibles" of the past are today's necessities.

But war is a relentless taskmaster. And so today we have a parade of "impossibles" of amazing variety—radar, the bazooka, unique monoplane fighters... and an airplane that fights seven miles up, dives at speeds approaching the speed of sound, spins out more than ten pounds of steel projectile per second!

This airplane is the Thunderbolt—the joint product of an A.A.F. Matériel

Command that knew what it wanted... and a corps of Republic engineers who knew it could be done. It is out of many such combinations that this nation is becoming invincibly armed... and its aerial supremacy made secure for the future.

Not the last "impossible" aspect of the Thunderbolt was its production. How could so intricate and elaborate a machine ever reach "quantity production"?

Yet, in a mere month, more planes came off the Republic Thunderbolt assembly line than came from the assembly lines of any other company in America producing fighter-type aircraft.

Republic, along with every other war material manufacturer, working hand in hand with the Army Air Forces, is ready for still more "impossibles." Republic Aviation Corporation, Farmingdale, L. I., New York, and Evansville, Indiana.

Republic flies in war poses to fight in peace



# REPUBLIC AVIATION

CORPORATION

Specialists in High-speed, High-Altitude Aircraft

Circle 10 on Reader Service

## Arguments on Increasing Takeoff, Landing Weights Heard by CAB

Pilots declare 1936 models are not stressed properly to carry extra cargo, despite bigger power plants and tests reported made by military authorities and airlines.

By MERLIN MICKEL

The question of increased takeoff and landing weights on certain airline planes with increased motive power remains as much as ever one for the Civil Aeronautics Board to answer, despite lengthy testimony by pilots as the limitations of the present DC-3's and Lockheeders.

The airline pilots' argument that the ship remains a 1936 model regardless of what is done to increase its power and is not stressed properly for anything beyond the kind of new carries may, in fact, have drawn the line a little finer, since the Board proposed the increases a year ago.

DC-3's and "Lockheiders" — The DC-3's came in for most of the attention, probably because, as the most widely used of the airline planes, they are the ships with which the pilots have had most experience. Lockheed Lodestars, however, also were under consideration.

The Board proposes to increase takeoff weight of the Douglas DC-3 by 1,000 pounds and its landing weight by 400, and to increase both landing and takeoff of the Lockheed transport by 1,000 pounds.

The increases would apply only to ships equipped with Pratt & Whitney SIC3G engines, and then only under proper flight conditions. Maximum proposed gross takeoff weight for the DC-3 is now 25,340 pounds. The increase would boost it to 26,340. Advocates say the Army is flying regularly DC-3's that weigh up to 30,000 pounds gross at takeoff.

Tests on Bear Note—Five days of testing were held on the suggested modification of the Civil Air Regulations. A tense situation arose at the last minute when an attorney for the Air Transport Association observed that the Board had held a "ball session" and was "obviously checked by the chairman's remark that 'we don't care for that characterization. It's a little strong'." The remark was withdrawn, the

attorney explaining his reference was to much of the discussion he thought had no value and "no place in the record."

Against the engineers and Civil Aeronautics technicians on the one hand, the men who fly the planes were strong in their protests against load increases. And whatever the engineers' curves and charts and flight test reports showed, they countered with personal experiences to refute that.

On the Record—It was part of this testimony that the ATA attorney, Charles M. Devaux, sought to strike from the record, claiming it was not germane to the issue at hand. His withdrawal has characterized it as a "ball session" at the suggestion of Chairman L. Welch Pope, but test has notion, Pope explaining that the conference was an informal, informative meeting at which witnesses were not sworn.

Charles Dyer, of the Flight Engineering Division of Civil Aeronautics Administration's Safety Regulation, closed the session with

a remark that, while some of the evidence was not entirely pertinent, the members had drawn together a group of pilots, manufacturers and airline people such as seldom is assembled in one room, and the record should remain intact. Then, he said, it could be said in this and other proceedings.

Witnesses — Pope said the Board's position was that this year wasn't the sort of record you strike things from. He invited Devaux or anyone else to submit "collateral" information for the Board's information. Devaux expressed confidence in the Board's ability to cope with the issue, but pointed out that many statements made were from memory, adding that he felt called on to answer them if they were to be left in the record of the proceedings.

Testimony for the pilots was led off by David L. Behncke, president of the Air Line Pilots' Association. Nearly a score of witnesses supported him. They spoke, they said, for other pilots on their lines, and before the last one had said down, flyers on every line in the continental United States had been represented.

Not one of them favored the proposed weight increase. The fact that some Army operations, notably by the Air Transport Command, had been flown at excess weights, they said, did not justify extension of the increased limit to include commercial flight operations.

Azay Tests Cited—The cotton-



## AA STATION MANAGERS MEET:

Attending American Airlines' semi-annual regional meeting of station managers recently in Phoenix were: (seated, left to right) H. L. Whitmore, western superintendent of station operations, Fort Worth; Rex C. Fuller, station manager at Tucson; E. V. Fox, station manager at Phoenix; Miss Richey, secretary at Fort; David O. Eaton, station field supervisor, Fort Worth; (standing, left to right) E. W. Mascher, station manager at El Paso; James E. Gutter, station manager at Baraboo; R. W. Duane, station manager at Long Beach; T. W. Brooks, director of station operations; R. M. Wilton, station manager at Palm Springs, and L. J. Bush, station manager at San Diego.

tion by Behrke and his friends that tomorrow's yardstick should not be applied to yesterday's planes was answered with testimony that the proposed load increases had been proved entirely feasible, not only by the fact that they are being flown every day in military operation, but in thorough tests as well. CAA Administrator Charles I. Stanton, explaining that the increase was being considered at the request of the military, said CAA tests on the DC-3 made before the weight boom was officially proposed had indicated that it could be made without sacrificing safety standards.

Airline engineers took the same view. Among the witnesses was a representative of Pan American, who said that company had a record of 12,460 takeoffs in commercial and military operations with DC-3 type planes in excess of the present Civil Air Regulation load limit, and more than 3,600 of these were beyond the proposed load extreme. All, he said, were without incident attributable to the excess weight.

**Structural Fatigue** — Behrke's argument that structural fatigue and crystallization would be a threat if the increases were allowed was countered by Charles French, chief engineer for Eastern Air Lines. French pointed out that a good many 15-year-old Ford V-8 engines still are operating in South America, and that DC-3s, the DC-3's predecessor, still are being used.

To some who heard the testimony, it seemed that a time when new equipment was unavailable was a poor one to establish such a full record of adverse pilot experience with planes in use. Others like Dyren, however, felt that a full airing of the pilots' viewpoint had worth both through its bearing on the current problem and the information it made available to the Board for consideration elsewhere.

One thing is certain. The pilots took full advantage of the attention to tell CAB exactly what they thought of their ships. Some observers thought the ATA's attempt to expunge part of the record was ill-advised and might be interpreted as a discredit to the pilots by the airlines employing them. Others concluded that ATA simply misinterpreted the proceedings.

## Panagra Converts DC-3A for Freight

Panagra has made its air freighters out of three DC-3As recently allotted to it and has the ship in service with one round trip weekly between Balboa and Buenos Aires.

Since the conversion, the plane can carry a maximum payload of 5,800 pounds, with special bars and rope nets to secure the cargo. To store shipments of high value, a special compartment about the size of a large safe was built into the cockpit.

**Luxury Products** — For transportation of luxury products, such as candy, in addition to more routine commercial shipments, Panagra has devised a space-available method to permit special rates.

Pan American-Greece plans to use four-engine flight equipment when it is available after the war, but as the mountains in studying technical questions through its present all-cargo operations.

## AA Official Urges Plane Return Plan

Manx Administration set policies for "bumping" of air transportation system.

Charge that "sloppy Administration policies" are preventing wholesale wartime air service. Ralph B. Damon, vice-president and general manager of American Airlines, protested lack of a plan for the return of more planes to the nation's airlines and expressed hope that "this same bumping will not be continued in the international air transportation field."

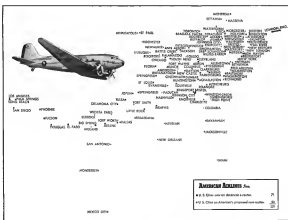
**Addresses Traffic Group** — Damon, speaking before the Worcester (Mass.) Traffic Association, said assurance of airways at the outbreak of war was "indisputably necessary" but that the assurance was made necessary "only by sloppy Administration policies with respect to aviation in the 10 years before Pearl Harbor."

Saying that all transportation "seems to have been made the whipping boy by the Administration," Damon charged that aviation was getting the greatest share of the "kicking around" and called upon "our Administration to promptly establish and execute a plan so that the important war service of rapid transportation will not fail our country in this time of need."

## NATA Unit Formed

Minnesota chapter of National Aviation Trade Association was organized during the Northwest Aviation Exposition, with Clarence Brock, flying school operator of Mastic, as president.

The association, made up of base operators, airport managers and flight instructors, protested Army induction of WTS instructors and asked that they be permitted to apply for commissions.



**American Airlines Inc.**  
 • P. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

## Postwar Plan of American Airlines

**T**ODAY American Airlines operates 8,305 miles of airways throughout the United States and into Canada and Mexico. We have filed applications for authority to operate 3,322 additional miles within the U. S. and 3,419 miles to Europe. The airmap above shows the cities which American Airlines now serves and seeks to serve. This is our present plan, but we believe that the public interest will require American to serve more cities.

This is our contribution to the nation's growth, prosperity and protection of our nation.

Every city in our land must do business with many other cities all over our three million square miles. That calls for transportation of people, mail, merchandise and materials of many kinds. The

softer and more flexible the transportation facilities, the closer together we become, and the more effectively we can work together.

In this war, our Airlines, cooperating with the Army Air Transport Command and the Naval Air Transport Service, are circling the globe with daily flights over arctic, jungles, oceans and deserts. What they are doing is the blueprint for your new world. It stems from the fact that air is universal, available to everyone, everywhere, able, and it is our purpose to meet our air demand.

There is no pessimism among those who are thinking in terms of air transportation for the future. They see more new prosperity and more achievements of all kinds than were ever possible before.



Panagra's Rope Nets for Cargo: Interior shot of the Douglas DC-3A, which Panagra has converted to cargo operations, shows special bar construction and rope nets used to secure the loads.



## This will take a man higher even than a P-51.

THIS scientific apparatus looks quite earth-bound.

But, for experimental purposes at least, it can take a man higher than any aircraft ever built.

It is Sperry's new High Altitude Laboratory, constructed through the co-operation and assistance of our Government, and dedicated to the service of our Country in memory of Professor Blinn Vane, a Sperry engineer who lost his life in the performance of his duties at the war effort.

This laboratory helps find the answers to questions like these:

How does man react in the atmosphere when the sub-zero cold

blows with his heated flying suit? With an instrument that works perfectly at 20,000 feet, "cook out" at 40,000 feet?

The laboratory can mechanically simulate atmosphere pressures equivalent to those met at altitudes over 45,000 feet. It duplicates temperatures as low as 57 degrees below zero Fahrenheit.

It permits the testing of flight instruments and the reactions of men who are stuck under atmosphere and near-zero conditions totally alienated with those met in outer space.

Testing the confidence of man and instruments in this laboratory will lead to better protection for the lives of our

navy and naval fliers, and make possible improved instrument designs and more efficient operations.

Superior engineers and a medical staff, trained in the technique of the physiology of high-altitude flying developed by the Mayo Clinic and Medical Departments of the Armed Forces, direct the Sperry laboratory. This laboratory serves other war manufacturers as well as our Armed Forces.

It is Sperry's hope that the men and grades of man and his instruments in the laboratory will make possible the development of the perfect man-instrument team that will function in complete harmony in the frigid blue of the atmosphere.

**Sperry Gyroscope Company**  
INC.  
BROOKLYN, NEW YORK DIVISION OF THE SPERRY CORPORATION

## Feeder Hearing Boils Down To Surface Carrier Issue

General agreement registered on Beitel-Madden report, although certain sections drew attacks, mainly from bus lines.

From the start of the Civil Aeronautics Board's hearings last week of oral arguments on the local feeder-pickup investigation, interest centered in the familiar issue of surface carrier entry into the air carrier field.

Over all, there was general agreement with the report written on the main question by examiners Beitel and Madden after last October's lengthy hearings. Badly needed sections of the report, however, drew attacks, chiefly from bus companies seeking entry into the feeder picture.

**ALPHA Objections**—The Air Line Pilots Association, to solve a few days earlier in the Board's hearings on weight increases proposed for commercial aircraft, registered "assailable opposition" to suggestions that single engine operation and single pilot handling of multi-engine planes be permitted, citing cost of one-engine failure in multi-engine operations.

But attention seemed to focus on the Board's interpretation of Sections 401 and 404 of the Civil Aeronautics Act that now bars surface carriers from the air field. As might be expected, aviation witnesses urged retention of that view, while proponents of surface carrier entry sought to validate contentions that the CAB had erred in interpreting the intent of Congress.

**Greyhound Protests**—The Greyhound Co., seeking a network of routes throughout the country, registered protest at delay in hearing of helicopter applications, and told CAB members that having decided to "put its entire faith" on the helicopter, it would not ask for authority to operate any other type of aircraft.

Robert Driscoll, Greyhound general counsel, said Igor Sikorsky claims a 26-passenger helicopter with a 100-mile-per-hour cruising speed can be developed for airline use as soon as any other type of feeder plane.

**Assault Opposite**—Greyhound testimony scored airline opposition, and the bus company's attorneys claimed that the proposed helicopter network would draw its

traffic from the present private automobile traveler, not from airlines, railroads or even bus lines themselves. Schedules would be integrated with bus operations, it was brought out. Spokesmen asserted that Greyhound does not expect to carry passengers by air for distances greater than 250 miles, and contended this would help the airlines.

Both sides' arguments of Greyhound and Leland Talafiero, counsel for Public Service Interstate and Public Service Transport, New Jersey surface carriers, questioning by Board Member Ryan failed to bring out



FONDA'S 8-HR. RECORDER:

Ponda Corp., of New York City, claims eight hours of continuous recording on cellophane for the instrument which, at the Meriwether Aviation Exposition at Minneapolis, had its first demonstration in that region. Airport control towers and recording of test flight conversations are being suggested too. Ponda reports that American Airlines and National Airlines have tried the machine, have been studied by Phil Hoffman, radio station man

any answer as to the investment bus companies expect to have in air transportation in relation to investment in ground transport facilities.

**New Phase**—Public Service arguments injected a new phase into the hearing. The company did not appear at the original examination hearing and proposed its current plea on the basis that New Jersey presents a radically different picture.

Talafiero said that the public service companies started with use of home cars, graduated to street cars when they were designed and now are in process of establishing bus service on all their routes. This sequence, he said, makes it logical that the companies be permitted to give air service as the latest improvement in transportation methods. The applications were filed after the examiners' hearing. Talafiero pointed out that competition on the ground was hampering mass transportation facilities, and helicopters operated by bus companies should be permitted to parallel ground lines to furnish faster transportation. He brought out that bus travel from Newark to Hackensack—an often apart—requires one hour, while helicopter operation would cut the time to ten minutes. The examiners, Talafiero said, did not take this type of service into consideration in their report.

**Waves Against Inexpensive Lines**—Severin Gardner, attorney for Eastern Air Lines, warned against issuing up of "wholesale improvement carriers" and charged that promotion with no public responsibility were behind many of the feeder applications. Asserting that present airlines want to see new carriers "whose conduct" he contended that the long-term interests of the public require care in granting of new certificates.

He cited several examples of local airlines that have already "failed," and argued that present carriers could care for the airline needs of cities near their routes without great additional expense. This, he said, is the logical way to develop the country's air pattern.

**Safety Rules**—William Ong, president of Consolidated Airlines, with applications for Northwestern service, argued for revision of safety rules to permit single-engine operation and permission to use one pilot in twin-engine craft. He contended that increased efficiency of modern engines makes this feasible.



# Out in Front!

More propellers . . . better propellers . . . that's what gets Sensenich out in front on nearly 90% of the nation's light planes! And "know how" based on 13 years' experience . . . continuing research in design . . . constant improvement in manufacturing methods . . . daily increase the margin by which Sensenich is out in front as America's largest manufacturers of wood aircraft propellers.



That's why you'll find a Sensenich propeller on the Piper Cub Coupe (shown above) and on all light planes used by the Army and Navy. Private and commercial fliers also prefer them. Sensenich is a prop you can trust and most pilots do!

Design heavy production schedules to meet government contracts, meet Sensenich propellers are available to meet non-military requirements. Ask your supplier.

**SENSENICH BROTHERS**, adjacent to Lancaster Municipal Airport, 4211, Pennsylvania — West Coast Branch, Glendale, California.

**PROPELLER TIPS**—To avoid throwing the propeller out of track and pitch, its bolts should be drawn down evenly a little at a time, moving across the hub from one bolt to another. This should be done carefully to avoid bending wood fibers at edge of metal flange.

**SENSENICH**  
AIRCRAFT PROPELLERS

## Minn. NAA Pushes Port Drive in State

19 chapters select committees to draft program for aviation developments.

The 19 chapters of the National Aeronautic Association in Minnesota propose to assume a major role in the development of aviation in that state after a series of meetings held in conjunction with the Northwest Aviation Exposition. The exposition and related activities in Minneapolis drew more than 15,000 persons over a period of a week.

NAA members were told by the state president, John McKee, that their major job is to secure adoption of an amendment permitting the state to construct, improve, maintain and operate and meet municipalities in operating airports and to permit the location of gasoline and aircraft in the state to raise money to support the state program. A committee was appointed to draw up a program for development of aviation in Minnesota and will make a first report as early as Apr. 15.

**Planning Conference**—Public officials held a planning conference during the exposition, at which C. Edward Leasure, chief examiner of the CAB, warned that the country must "make haste slowly" to assure a firm foundation for aviation. He said there was a tendency to overestimate rates of aviation growth and to press for a too hasty determination of policies. He pointed out that in Minnesota alone there are 84 requests for certified airline stops with only four such stops at present. Leasure indicated federal funds, possibly totaling \$15,000,000 annually, would be necessary to aid development of feeder lines.

Russell Turner, speaking at a banquet sponsored by the Twin Cities Chapter of NAA, said private air travel will play the biggest role in post-war aviation with the commercial airlines figuring in only a small segment of the air transportation picture. He predicted earlier to newsmen that from 300,000 to 500,000 planes will be in operation ten years after the war, and that they would sell for \$600 up.

**Change to Be Gradual**—Consolidated Airlines' president, William A. Ong, told the group of public officials that there will be no over-

night change from present methods of travel to travel by air in the private travel field, and warned the officials that consolidation must make airports available if they expect to receive post-war air service.

James C. Welch, of Consolidated Teller Aircraft Corp., speaking as representative of the Personal Aircraft Committee of the Aeronautical Chamber of Commerce of America, outlined a program for aviation development and criticized Ong's warning that communities must provide airports to derive air development benefits.

**Gliders**—Gliders will prove of great benefit to thousands of sportsmen, the civic officials were told by M. Nathan Whitehead, vice-president of Lister-Kauffman Aircraft Corp., of St. Louis, an expert in that field. Whitehead forecast a push and pull for gliders for small towns by use of gliders and glider trains.

A forecast of the Civil Air Patrol's role in the post-war period was given by Laurel Carl Earle L. Johnson, CAP national commander, who said intensive work will be done to bring the air age into being after the war is one of the principal aims of the CAP.

## Bill Asks Temporary Emergency Permits

A bill to permit the Civil Aeronautics Board to grant temporary certificates for airline service "for which there is an immediate and urgent need" for a period not to exceed six months has been introduced in the House by Representative Clegg, of South Dakota, and referred to the Interstate and Foreign Commerce Committee.

**Issued Without Hearings**—The bill would restrict such service to persons "having no air experience" and "not meeting such need," permit granting of the certificate without hearing or other proceedings and provides that such certificate will "create no presumption that corresponding permanent certificate will be granted at the expiration of the valid period, which could, under the bill, be extended under the second War Powers Act.

A further provision would prevent issuance of such a certificate unless "there is no reasonable prospect that such transportation by the carrier will be less than the gross postal receipts to the government from airmail."

## U. S., Britain Hold Preliminary Talks on World Air Conference

Berle and Warner in London conferring with Beaverbrook while, in Washington, Grew, Pogue and Burden prepare for meeting with Russian delegates.

Washington and London got down last week to parallel discussions looking toward an eventual United Nations agreement on the post-war operation of international air services.

Assistant Secretary of State Charles Burke, Jr., and Edward Warner, Civil Aeronautics Board vice-chairman, arrived in London to survey the entire field of civil aviation with Lord Beaverbrook and Peter Mansfield, Beaverbrook's personal aide on aviation.

**Washington Talks Planned**—In Washington, meanwhile, Joseph C. Grew, special assistant to Secretary of State Cordell Hall; L. Welch Pogue, CAB chairman, and William A. Burden, Assistant Secretary of Commerce for Air, prepared for conferences with a

Russian delegation, not yet officially announced.

Those long-awaited first steps were described officially as of a most preliminary nature, with the sole objective of exploring common ground and principal points of difference. The State Department said the preliminary talks would lay the groundwork for "preliminary international discussion this summer." It was assumed that participants at such a conference would be the United States, Britain, Canada, possibly other British dominions, Russia, and probably China.

**Objective**—The aim is to develop the subject ultimately to the point where a full-scale United Nations conference can be held by the year end. This objective, expressed in official circles, leads to two considerations:

**The Anglo-American conference** conceivably may go beyond the ostensible purpose of their discussions and lay out the tentative agreements that they would like to see adopted by all allied countries.

**The shadow of the November elections** may hang as heavily over both Washington and London that even tentative commitments will be difficult to make. Russian views on post-war civil aviation still amount to about as much as anything with those of the present administration, insofar as they have been revealed, and of this the British as well as the Americans doubtless are aware.

But apparently the present discussions will go as far as possible short of agreements to iron out the differences among the three countries involved.

**Multi-lateral Agreement**—In London, Berle may be expected to advocate a multi-lateral agreement to provide freedom of transit with right of technical stop and right to check on passengers operating in the country whose nationality the airline possesses, inter-governmental regulations for far-reaching routes, general use by all nations of certain bases along established international routes, and some kind of international regula-

## Hatching Egg Test

Shipment of eggs by air has been tested in an experiment in which American Airlines participated, to have had little effect on their schedules.

American carried 15 dozen eggs 3,500 miles by plane, with frequent checks on temperature and humidity in the greenhouse. A weather test was kept meanwhile at the University of Maryland, under laboratory control.

Scientists at the university's poultry department, which reported last week that percentage of hatchability of the twelve eggs was 83% for the experimental group and 91% for the control group.

The experiment was made to study feasibility of using air transportation to rehabilitate poultry flocks of occupied countries. The laboratory men and the results indicated that air transportation will "lend itself very favorably" to the rehabilitation plans. The test was said to mark the first time that strict laboratory procedures had been followed in making such a shipment.



# Disposal of Government War Plants and Equipment

In the last four years, the Federal Government has spent over fifteen billion dollars on war plants—two- and one-half times as much as was spent by private industry.

Of this fifteen-billion-dollar government investment, about one-third has gone into facilities for the manufacture of aircraft and for ship construction and repair, another third has gone into plants for production of combat ordnance, and the remaining third has gone into a variety of facilities for making synthetic rubber, metal products, machinery, and miscellaneous equipment.

Most of these plants are in industries that are regarded as beyond peacetime requirements. Furthermore, their convertibility to other civilian uses will, in many cases, be complicated by their specialized equipment and layout, by their tremendous size, and by their uneconomical locations. At the moment, it looks as if roughly one-third of the government-owned plants and equipment can be converted fairly readily to peacetime operations, and will, therefore, be easily disposable to private enterprise.

The discovery of unsuspected uses for war plants and equipment may well make the disposable proportion to one-half or more. The government, at the end of the war, may own about one-third of the convertibility-capable industrial capacity of the country. It will be by far the largest owner of machine tools, it will own more steam alternatives capacity, more capacity, many miles of pipe lines, and more ships than the entire private shipping industry.

What the government does with its war plants will have a profound effect on the free enterprise system and on all workers, employers, investors, and consumers who have a part in that system. If this problem is handled badly, we may find ourselves embroiled in a trend toward monopoly and government operation of industry. If the problem is handled well, we shall have taken a big step toward freedom of action in a competitive society, toward full opportunities for business enterprise, toward well-paid productive jobs for workers, and toward a higher standard of living for us all.

Recently, three important events have signaled encouragement. They are the report of Senator George's Committee, the Baruch report, and the report of Senator Truman's Committee. These reports are noteworthy for their consistent airing up of a complex problem, for their recognition of the major responsibility of government in making a successful transition to peace, for their insistence on wise policy and good administration, and for their genuine concern that our productive power be given full opportunity in a free private enterprise system. These reports agree on basic principles and many specific lines of action. There are, however,

important areas of policy formation, organization, and procedure—especially in regard to plant disposal—which remain to be blue-printed.

In formulating the policies and practices to be followed in dealing with government war plants, our major goal must, of course, be a high level of production and employment in private business after the war.

Government operation in competition with private employers and privately-employed workers will not be desirable because it will make investment unattractive to private capital and will limit opportunities for private employment. On the other hand, sales to private buyers which result in increasing the concentration of industry will also be undesirable. We must use this opportunity to strengthen the competitive enterprise system and to move away from, not toward, the concentration of economic power in either public or private agencies.

To accomplish these objectives, a program of action such as follows will be necessary:

1. An adequate reconversion organization will be needed in the government, but its powers and responsibilities should carefully be defined by Congress. Fortunately, an able Administrator of Surplus War Property already has been appointed. It will be essential for him to work in closest cooperation with Congress and with the Armed Forces and other executive agencies. The Office of War Mobilization, and ultimately the President, must be responsible for seeing that the Surplus War Property Administration is not sidetracked by the spending agencies and is not dominated by their short-run needs. Funds must be supplied generously to the Surplus War Property Administration, so that he can set up an organization adequate to cope with this large and complex job. Business, too, must be generous in loaning top-flight executives for postwar government service.

2. One of the first acts of the Surplus War Property Administration will have to be to assemble a complete inventory of government war plants and equipment, to make possible the planning and control of the disposal process, and to form the basis of catalogues of property available for sale.

3. Cooperation between the executive and legislative branches of the government will be needed to develop at least tentative plans with respect to matters of public policy which are of special importance to a successful transition to peace. Among these matters are the size of the military establishment to be maintained in time of peace, the stand by facilities and reserves of material necessary for our security in case of future war, and our policy regarding import and production of synthetic rubber and other critical and strategic materials.

4. The Surplus War Property Administration should

obtain from the Armed Forces, acting under congressional directives, specification of those plants which are needed to supply our peacetime Army and Navy and to provide the essential reserve capacity in case of war.

5. The Surplus War Property Administration should select certain war plants in depots in which to store the huge surpluses of inventories and equipment which will have to be removed from private and government-owned factories in order to make possible their conversion to civilian uses.

6. Those plants which are not desired by the Army or the Navy, which are not needed for storage, and which clearly will be unsuitable for peacetime utilization should be scheduled for dismantling and disposal personnel.

7. The two or three billion dollars' worth of government facilities intermingled with private plant should receive attention with a view to early sale, temporary maintenance or use under lease, or early removal.

8. The various plants and pieces of equipment available for sale to private business should be classified conveniently, subdivided, and advertised to prospective buyers or lessees. Before the Surplus War Property Administration offers, for private sale, plants and equipment not desired by the Army or the Navy, he should ascertain whether the plants or equipment are desired by other branches of the government or by public corporations such as the T.V.A.

9. Whenever property can be sold at prices approximating depreciated production cost, that will be by far the best solution. Generous time-payment terms should be offered. In many cases the government may be unable to sell the property for reproduction cost less depreciation, for the simple reason that no one would think of reproducing it. The property may already be partly obsolete, or, because of its size, location, or other characteristics, may only be modestly well suited for commercial use. This should not prevent the government from selling it, provided a price which fairly represents the worth of the property can be obtained. The best test of that worth is the price realized by active bidding under favorable market conditions.

10. When property cannot be sold at a fair price, temporary leases with options to buy should be employed to get the facilities into productive use. This should not, however, be done on terms which would cause unfair competition or create clearly excessive capacity in an industry. And the lease must be temporary, it must not be the means to prolong government control or ownership.

11. The government should offer the strongest possible assistance to local groups or industry groups seeking subsidies for continued operation of war purposes. Subsidies will burden the Treasury and lead to inefficient use of resources. They will be justified only to maintain facilities needed for national security.

12. The plants and equipment offered for sale and lease should include sufficient quantities in small enough lots to satisfy the demands from small business. The war

has tended to concentrate production in larger plants. After the war, we should seek a wider distribution of the government war facilities.

13. Insofar as possible, war buildings and equipment should be offered for sale in units which can be purchased by businesses in peacetime industries. Many of these industries have had to get along during the war without adequate replacement and expansion, and will be ready to buy if they are able to get what they want from the government. This is a particularly desirable market for surplus government property since these industries are, for the most part, not faced with the problem of excess capacity.

14. Property, such as machinery and other movable equipment, which is in excess of our domestic requirements or is more urgently needed by other countries, should be exported. We shall need, and can take, large supplies of raw materials in return.

15. Property which is not needed by the Armed Forces, which cannot be sold or leased on terms which would be fair to competing plants, which cannot be dismantled and distributed piecemeal, and which cannot be sold abroad, should be scrapped as soon as its non-disposability is apparent. The disposal of war plants should be completed within three to five years.

16. All negotiations for sale or disposal should be matters of open public record. As Mr. Baruch has said, the process must be conducted in a glass house. This is as much for the protection of business as for the protection of the government.

These courses of action do not include everything that must be done, but they do indicate the general lines along which our surplus war plant disposal must proceed if it is to avoid precipitating needless transition unemployment.

The gravest danger of all will be red tape, intergovernmental conflict, and inadequate administration. It would be a great misfortune for the executive and legislative branches to quarrel over details of legislation when they agree on the basic principles to be followed in handling the problem. Obviously, the Surplus War Property Administration must cooperate with Congress and look to it for policy guidance. Just as obviously, the disposal problem will involve great difficulties of administration which must not be complicated by congressional interference. We shall need the best we can get in careful policy making, detailed planning, good organization, and vigorous action. This is a matter of vital importance to every American. The stakes are too high to tolerate poor administration or petty politics.

*James H. McGraw, Jr.*

President, McGraw-Hill Publishing Company, Inc.



## Pickup, Feeder Line Operators Organize

Pickup and feeder line operators and applicants began organization of a Feeder Airline Association at a two-day conference in Washington last week.

Representatives of 16 companies were present and plans were made for a first organization meeting in June to be held in Washington.

**Committee Named**—An organization committee was named with Harry R. Stringer, vice-president of All American Aviation, Inc., as chairman; William R. Kent, Southair, Inc., vice-chairman; and Joseph I. Minkner, Jr., Hawthorne Aircraft, secretary and treasurer.

A tentative Board of Directors appointed included: Halney R. Halney of All American Aviation, Inc.; Herbert Fox, Southern Aviation, Inc.; Cody Laird, Southwestern Air Express, Inc.; James G. Ray, Southwest Airways Co., and Alden B. Woodbury of Parks Air Office, Inc.

† Aims — Objectives and purposes to be incorporated in the articles of association, probably at the June meeting, were listed as:

• Establishment of a comprehensive network of feeder airlines as an integral part of the nation's air transportation system to extend to the maximum number advantages and benefits of direct scheduled air service for mail, passengers and cargo.

- Serve and advise with all federal, state and municipal agencies charged with the responsibility of the development and regulation of air transportation.

Advocate laws and official regulations which, consistent with the best interest of the public, will facilitate this program.

► **Prognose** airmail, air cargo and air travel  
► **Propaganda** public support of the movement

- ▶ Promote civil aviation and the advancement of aeronautical science in the public interest and that of national defense
- ▶ Cooperate with all recognized organizations engaged in the promotion of aviation

- ▶ Cooperate and advise with local

- ▶ To promote healthy competition and to prevent monopoly in air transportation.

## PCA Withdrawal in Caribbean Approved

CAR authorizes cancellation of some applications filed last fall.

**Petroleum - Central Airlines** has been granted permission by the Civil Aeronautics Board to withdraw application for a series of routes throughout the Caribbean zone. The applications were filed last fall and asked routes stemming from New Orleans to Merida, Mexico, and through Central American cities to the Canal Zone and onward across northern South America to Trinidad, through Jamaica to Barranquilla and from Miami via Cuba and the Indian islands to Trinidad.

PCA resident C. Rodell Mauro explained the withdrawal by saying that "after intensive research and a thorough analysis of applications, we have concluded, on the basis of known facts at the moment, that the rational interest no longer required that PCA prosecute this particular application." He did mention domestic applications that would feed "what might be termed Caribbean area interchange points" at New Orleans and Miami.

► **Earnings Report**—PCA last week also released its annual report to stockholders and employees, in which it is revealed that the company's net working capital increased to \$3,348,000 at the end of 1943 from \$3,071,000 in 1942. Net profit for the year was \$279,000.

Seven planes in commercial operation flew 33,312,000 passenger revenue miles, almost 95 percent of the 34,968,000 passenger revenue miles of 1942. The last part of 1942 was flown with updated equipment, the first part with the full complement of 23 ships.

**19th Year**—The airline will begin its 18th year of operation Apr. 3, having been founded as the Clifford Ball Airline in 1927. Ball, pioneer in plane service in the Pennsylvania area, operated from Pittsburgh to Cleveland and this line later was acquired by Pennsylvania Air Lines.

## SHORTLINES

▶ Inlandair Transit Lines has protested to the Wyoming State Public Service Commission against United Air Lines' application for a permit to establish interstate service between Cheyenne and Red Springs, Wyo., contending the service would compete with integrated bus-plane service. Inlandair Transit has proposed to the Civil Aeronautics Board.

► Pittsburgh's Bettis Airport, now City-County Airport, is to get new asphalt runways and taxiing space and have main runways extended 360 feet. Improvements will cost \$35,000.

• The 38,257 combined rail-air express shipments in January were 32.6 percent over the 28,816 carried in January, 1963, Air Express Division of Railway Express Agency reports.

Continental Air Lines, making plans for its new service between El Paso and San Antonio, issues an "international travel packet" with pockets for tickets, baggage checks, passports and paperwork among the latter a Mexico City booklet. Continental connects with American Airlines' FAN 34 to Mexico City at El Paso.

FTWA has announced completion of more than 3,000 ocean flights for the Air Transport Command. More than half crossed the North and South Atlantic, the remainder being to South America, Iceland and between Africa and the United Kingdom, and special missions to Arctic ports from North America, Europe and Africa. ATC long-range airlifts were used Douglas C-54 Skyways and Boeing Stearman. President John F. Kennedy and more than a million miles a month are now being flown by the FTWA fleet.

► Pacific Overseas Air Service Command, commanded by Col. J. B. Jordan, is to operate the \$2,000,000 Army Air Force storage depot for trans-Pacific shipment of planes and aviation material being built at Alameda, Calif. The depot will have more than 80 acres open air and indoor storage, with five new warehouses, two more than a quarter mile long. To be completed in December, it will store new supplies and used material from overseas military units.

## CAR SCHEDULE

Aug. 11 Flouting an ordinance of 1913, and  
 American in Indian Agency, Tulsa and  
 Oklahoma City on International route to  
 Mexico (1914) (Chicago 122 342 1100)

Aug. 15 Publishing manifesto on spring  
 time of Alaska, New Orleans and West-  
 ern Airways for mail routes between  
 Anchorage, Fairbanks, Ketchikan and Seattle  
 (Chicago 113, 304, 305 and 307)

**Age 18:** Honored as A.E. American Aviation's youngest pilot in Military Action, Ohio, as it was from Pittsburgh to Huntington, W. Va. (Dated 11/17)

**May 3** Franchising opportunities in applications for areas. Available regions include Honolulu, Portland and Los Angeles. Sub Franchising, Portland and Seattle. Applicants are TWA, Shorin, West, Hawaiian Airlines, and Western Seaplanes Co. (Box 44) in 41

May 21 Pre-hearing conference on applications in Rocky Mountain area, along with Utah on that date. 77 See West Coast Area calendar. (P) (H) (L)

**Jeune École** (Jeune École) - école des Jeunes École

### CAB ACTION

• Civil Aeronautics Board has unveiled a temporary emergency order of last January that would ban passengers from taking a flight from New York to Miami on its route between New York and Miami. The board said the Board has no authority to ban flights, but it can order airlines to stop flights if they are not safe. The Board said it was not sure if the airlines would not want to fly the route.

- United Airlines has been authorized to transport anyone temporarily at Allentown, Pa., until a preliminary investigation is completed. Those appearing already are from previous violations of the airport as an offender of less than 100 but is classified.
- Provision for Special Airports to serve Major Local Airports, has been granted by the U.S. military to any necessary improvement of the air traffic control systems and to Special Airports to that service.

## CPA Flight Strips Built in Far North

A program of landing strip construction has been launched by Canadian Pacific Airlines. Strips 5,000 by 500 feet are being built in remote sections in northern Canada, from which passengers, mail and freight will be delivered to outlying points by boat and ski-equipped planes.

Flight strips for wheeled planes will be laid in prevailing wind direction and will have lighting equipment. This year is expected to see them at Red Lake, Pickle Crow and Yellowknife, says a report in *Forbes Commerce Weekly*. A strip already is in at Sioux Lookout, and the combination will give year-round facilities from Kenora and Winnipeg.



**for  
de-icing  
equipment**

For years, Mercury has specialized in the production of oil separators for use in connection with the vacuum pump in the deicing system — dumping many thousand units for both Army and Navy aircraft. Especially, if you use oil separator NAF 47089-1, you will be interested in our service on this widely used product.



**Tel-air** KNOWN FOR  
**ACCURATE PARTS MEAN LIVES LONG**

(SPECIALLY DESIGNED HYDRAULIC)

UPON the 30-thousandth part of an inch may bring the lives of as many full of young Americans. But long before Tel-air was manufacturing precision aircraft parts to perfection, precision was going into our products. Long before we achieved manufacture of equipment parts of highest quality, it was a "must" for Tel-air to be connected with the manufacture of their tolerance aircraft parts, from landing to completion.

Tel-air is getting more famous and has certainly better known of the airplane with which many parts are integrated, the accuracy and speed with which materials are parts, the perfection of Tel-air parts (98.95-99.95% acceptance) and the promptness with which delivery can be made!

Tel-air Parts do not fail.  
Send us your specifications

In the Air's  
**Tel-air**

On the Highway it's  
**Teleoptic**

**THE TELEOPTIC CO.**  
720 MADISON ST. MILWAUKEE, WISCONSIN

## A Step Toward Realism

THE WITHDRAWAL last week by Pennsylvania-Central Airlines of its application for routes into Central and South America and the Caribbean was as conspicuous as it was realistic. One responsible individual described it as statesmanship.

There are now pending before the Civil Aeronautics Board 104 applications for foreign operations. Of these, 94 are for scheduled services filed by United States companies and ten request non-scheduled flights. Seven of the 104 applications were filed by foreign companies.

In his letter to CAB Chairman Pogue, requesting withdrawal of its petition, PCA President C. David Moore said frankly: "After intensive research and a thorough analysis of the application, we have concluded on the basis of known facts at the moment that the national interest no longer

required that PCA prosecute this particular application.

Thus, the time of the Board's examinations and staff, the Board itself, and the company will not be expended on an unnecessary case. It will enable PCA to devote its full attention to other expansion plans it now considers more realistic.

The move is an encouraging step in the right direction toward sound economic and logical expansion. Too many foreign applications are before the Board which have not the slightest economic feasibility at this time, and this fact is recognized in the air transport industry, and by most of the companies which filed them.

CAB, already faced with unprecedented domestic and foreign problems of the most vital importance, with insufficient manpower, should not be compelled to delve into impractical, ill-timed cases

## The Wasp Problem

A Rep. Rameck's House Civil Service Investigating Committee launched an inquiry into the Wasp training project, a group of 122 instructors at one civilian contract primary school last week wired the President and other officials protesting the Army's failure to plan utilization of their flying ability and experience in the war effort although the Wasp training program continues, with 1,699 graduates planned by June.

The complaint is rising discontented civilian airmen as they leave their instructor jobs at schools no longer being used by the Army and face Selective Service induction. They point out these facts:

Civilian men pilots with thousands of hours of flying are ineligible for combat because of logical reasons such as age, but they are also deemed unfit for the Air Transport Command if they do not have 200 hours' time in planes of 200 hp. or more. Most of their work has been with power below this figure.

Yet civilian girl pilots are accepted for training with 25 hours. Upon completing a 6½-month flight training course paid for by the Army and taught by a civilian contract flight school, the Wasps are graduated with about 210 hours' instruction, plus the original 25 hours that made them eligible. These graduates are then given assignments derived from men pilots with thousands of hours flying time and years of experience.

The statement that all men pilots will be sent out of the country to fly and therefore necessitate use of women pilots to replace them is sound logic

as far as it goes, written say. But those thousands of civilian men pilots, who are "ineligible" for the ATC are also ineligible for combat. Thus, the argument of replacing all civilian pilots with women appears illogical.

One major example of inefficiency is in transitional training after the Wasp has been graduated from her 6½ month course by the civilian flight school. This transitional flying involves about 100 hours' training on heavy four-engine bomber equipment or high speed fighter aircraft. Thus, the girls are given an additional 100 hours of flight training by regular AAF pilot instructors, and each hour that the girl pilot receives this training from an Army pilot in Army planes she is taking the place of a combat pilot. Why not utilize more Army men pilots?

In addition to using the present backlog of civilian pilots, the Army might well assign two or three months of cross-country ferry flying within the U. S. to its young men pilot graduates. They could thus polish off their navigational cross-country techniques and at the same time deliver aircraft to domestic ferry points.

Furthermore, Army flyers returning from combat areas could ferry planes in the interval before their re-assignment, keeping their flight techniques sharp without combat strain. Large numbers of these men are being made available for domestic ferry operations in the U. S.

The evidence so far indicates someone has blundered. The costly and impractical Wasp program deserves close scrutiny.

ROBERT H. WOOD

After Victory  
many more Americans  
will be saying  
"Buenos Dias, Vecino"  
and  
"Bom Dia, Meu Vizinho"

Yes, we'll be saying, "Good Morning, Neighbor," to our Spanish and Portuguese speaking friends in South America, a lot more often—after Victory.

Then, improved aircraft and a vastly expanded network of airlines, will bring the Americas so close together that trips may be measured in hours—rather than days.

St. Louis to Sao Paulo, Rochester to Rio, Boston to Buenos Aires, Birmingham to Bogota, St. Paul to Santiago—such trips will become

almost as commonplace as a St. Louis to New Orleans flight today.

Right now, of course, production for war comes first. That's why, at McDonnell, we're working three shifts a day, making planes, parts, and plastics for America's Armed Forces.

But we're making plans even now to supply the type of aircraft which will help South Americans in a quicker realization of the rich future which is theirs. Yes, after Victory, McDonnell too, expects to be saying, "Buenos Dias, Vecino."

**McDONNELL Aircraft Corporation**  
Manufacturers of PLANE • PARTS • PLASTICS • SAINT LOUIS • MEMPHIS •



## **PRESS** and the Inspection Door Flies Open

As much as 30 minutes is saved in the inspection of a single plane by the new Hartwell inspection door latch. That means planes in action faster!



Patent  
applied for.

**The new Hartwell inspection door latch** ends the slow, tedious removal and replacement of inspection doors. Simple and rugged in construction, it contains four parts—trigger and bolt, made of light gauge steel, aluminum bracket, and twin springs (two are used for safety). It is light—weighs less than  $\frac{1}{2}$  oz.; rivets to the inspection door, and it fits flush!

Press the trigger of the Hartwell latch and the inspection door pops open! Press the bolt and it is locked shut! Two or more latches may be used on a single door, if desired. This inspection time-saver can be installed in a standard Army Air Forces cutout, shown on print 43G2853.

**New flush hinge.** Available with the new Hartwell inspection door latch is the new flush hinge. It is light and durable. Holds the inspection door to 30 degrees of full opening when it is released by latch. *For complete engineering details about latch and hinge write or wire our Los Angeles office.*

Single source for 779 different aircraft  
production parts and tools

**HARTWELL**  
AVIATION SUPPLY COMPANY

3417 CRENSHAW BLVD., LOS ANGELES 16, CALIF.  
DALLAS, TEX. • DETROIT, MICH. • KANSAS CITY, KAN.